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THE MORE IMPORTANT RECORDS FOR SEPTEMBER

The grasshopper Dissosteira longipennis Thos. was doing considerable damage in Oklahoma late in September and eggs were being laid in the Panhandle of that State. The differential grasshopper seems to be more numerous than usual in parts of Arizona. The populations resulting from great flight of Melanoplus mexicanus Sauss. into eastern Montana have been materially reduced by disease, predators, and parasites. Certain areas of eastern Oregon are recording heavy egg laying by Cannula pellucida Scudd.

While the Mormon cricket control program this year was conducted as a crop-protective measure, it has resulted in greatly reducing populations in a number of large areas. A general reduction in population has, we believe, resulted in all States in which control was conducted this year.

The infested area in Oregon, North Dakota, South Dakota, and Nebraska is more extensive than it was last year.

A general increase in Japanese beetle population is reported from the northern part of the infested area of New England, while in the central area in New Jersey numbers are below normal.

The oriental beetle has increased in northern New Jersey and southwestern Connecticut.

The Asiatic garden beetle has decidedly increased in numbers in northern New Jersey, southwestern Connecticut, in the Philadelphia area of Pennsylvania, and in Washington, D. C.

Fuller's rose beetle did considerable damage from North Carolina south and westward to Louisiana. It was observed on tung-oil trees in Alabama and Louisiana.

In general the hessian fly situation is not serious. However, threatening populations are reported from northern Indiana, northwestern Ohio, and southeastern Pennsylvania. The results of a fall survey are published in Supplement to No. 7, Insect Pest Survey Bulletin, September 20, 1938.

Late damage by corn ear worm is reported throughout the Southeastern and East Central States.

Very serious outbreaks of the fall armyworm are reported from New England, Middle Atlantic, South Atlantic, and Mississippi Valley States.

Damage by European corn borer was reported from New England, New York, Indiana, and Ohio.

One of the heaviest infestations of the corn leaf aphid in the last 22 years was reported from Wisconsin, with reports of heavy damage also from Minnesota and Nebraska.

The vetch bruchid has been discovered in the important seed-producing sections of Oregon, with indications that it is also established in southwestern Washington.

An outbreak of the sorghum webworm is reported from Arkansas and northern Texas.

Heavy infestation of the codling moth is reported from Virginia.

Damage by the apple maggot to both apples and blueberries increased in Maine.

Rather heavy infestations of citrus by whiteflies were reported as extending from Georgia and Florida to Louisiana.

The banded cucumber beetle did serious injury to a variety of truck crops from South Carolina around the Gulf to Texas.

Damage by the potato tuber moth to potatoes is reported from North Carolina and Louisiana; also considerable damage by this insect to tomatoes in California.

The tobacco moth was found injuring tobacco in pack houses on farms in Pittsylvania County, Va., and Rockingham, Forsyth, Durham, and Caswell Counties, N. C.

Mexican bean beetle did some damage in Connecticut and New York. More severe damage was reported from North Carolina southward to Florida and westward to Ohio and Tennessee.

Pickle worm injury to late cucurbits is reported from South Carolina and Missouri.

Flights of the cotton leaf worm moth into New England, New York, Pennsylvania, Ohio, Indiana, and Michigan occurred throughout September. In the Southern States extensive defoliation and ragging of cotton is reported to be general.

The fall webworm was generally abundant from Connecticut to Florida and Mississippi.

A very heavy infestation of walkingsticks was reported from Carbon County, Pa.

A sawfly, Diprion frutetorum F., was collected in New Jersey. This is apparently the first record of damage by this insect, which is a pest of pine, in the United States.

An outbreak of screwworms was reported from north-central Illinois and damage was also reported from scattered localities in the west-central part of the State.

The outbreak of the spruce budworm on jack pine in southern Manitoba and northwestern Ontario has apparently increased and spread considerably in 1938, and new areas of infestation have been reported. Hundreds of miles of forest showed a solid red from the air, owing to the work of these insects, and considerable tree mortality undoubtedly will result.

Field investigations on the hemlock looper in the interior of British Columbia indicate that the larvae were less abundant than in 1937, and there was a high degree of parasitization. About 40 percent of the hemlock was killed at Trout Lake and near Golden, as a result of the outbreak. These are the first outbreak records of Elloplia fiscellaria Guen., from the interior of the Province.

The larch sawfly continues to be abundant in many parts of the Provinces of Eastern Canada. Sporadic outbreaks are present in Manitoba. Another species of sawfly, Anoplonyx laricis Marlatt, was found to be widespread on larch in southern Manitoba and in western Ontario, north of Lake Superior, but was apparently not injurious. Light infestations were reported in southern Ontario.

THE MORE IMPORTANT ENTOMOLOGICAL FEATURES IN
CANADA FOR AUGUST AND SEPTEMBER

The grasshopper infestation in southwestern Manitoba was augmented by migration flights. In this area crops were cut early to lessen damage, but late crops suffered. An adult survey showed a heavy build-up of the infestation in the southern and western margins of the Province, probably largely due to flights. Weather conditions were favorable to egg laying, and a heavy infestation is expected in 1939. In southeastern Saskatchewan there were general flights of grasshoppers, and the invasion and loss in the Regina area was serious. Grasshopper damage and premature cutting rather generally reduced the production of oats and barley, with severe but spotty losses in some districts. Late wheat crops over much of the southeastern and south-central area suffered heavily from the clipping of heads by flying grasshoppers. Oats also were severely attacked, even after being stooked. Present prospects indicate an extension of infestation into areas of Saskatchewan not previously infested this season, and a general increase in intensity in most instances. In southern Alberta there was some increase of grasshopper numbers, as compared with 1937, and slight losses occurred in late crops. Grasshoppers were causing concern in parts of the Nicola Valley, British Columbia. The entire Peace River country was also more or less infested.

The wheat stem sawfly caused damage to wheat in central and southern areas of Alberta. Rains in the latter part of August rendered most of the sawfly-cut grain a total loss by knocking it flat to the ground. Considerable loss also occurred in Saskatchewan, where the damage was heavier than in 1937, although still considerably below the average annual total of the years prior to 1934.

An outbreak of the European earwig was reported for the first time in Eastern Canada, at Ayton, Grey County, Ontario.

The outbreak of the armyworm which occurred during the summer involved, to some extent, every Province from Prince Edward Island to Saskatchewan. The outbreak was locally severe in the three Maritime Provinces, Ontario, and Manitoba. In Quebec several counties were involved in a widespread outbreak, which affected thousands of acres of crops. The infestations in Saskatchewan were scattered, localized, and of light-to-moderate intensity, but several were in open prairie from which no reports were received in previous years.

A major outbreak of second-year white grubs largely destroyed thousands of acres of semipasture, and garden and field crops, in Durham, Ontario, and York Counties, Ontario. Important injury to market-garden crops also occurred in the Niagara district. In addition, there was much damage to crops by these insects in southern Quebec.

Records of abundance of European corn borer moths and larval establishment at the Chatham laboratory, in southwestern Ontario, indicated a tremendous increase in infestation during the present season, and it was expected that the borers would be more abundant than at any time during the last 10 years.

Reports of damage to sweet and ensilage corn by the corn ear worm were received from southern New Brunswick, and locally from Quebec, Ontario, Manitoba, and Saskatchewan.

In Prince Edward and Northumberland Counties, to the north of Lake Ontario, a severe outbreak of the tobacco worm developed on tomatoes. In some fields the plants were stripped and the fruit attacked.

The potato or tomato psyllid (Paratriozza cockerelli Sulc.) greatly increased during the summer and now occurs over a large part of Saskatchewan and Alberta.

A cockroach injuring roses in a Grimsby, Ontario, greenhouse has been determined as Pycnoscelus surinamensis L. These specimens appear to be the first found established in Canada.

The codling moth has been very destructive in many apple orchards in the warmer districts of Ontario, and has been more injurious than usual on pears.

The European red mite has been more abundant on and injurious to plums and apples in southern Ontario than for several years. Many apple orchards in the Okanagan Valley, British Columbia, suffered injury from this species.

Weather conditions in the Niagara district, Ontario, this season were very favorable for the grape leafhopper and injury was severe in many unsprayed and poorly sprayed vineyards.

Twig infestation by second-brood oriental fruit moth larvae in the Niagara Peninsula at the end of August was lower than last year, with an average infestation of 2.5 percent, as compared with 3.5 percent in 1937. In southwestern Ontario the infestation was still running high, averaging 17.1 percent, with individual orchards as high as 55 percent.

The tarnished plant bug has been the cause of serious damage to peaches and pears in some orchards in the southern Okanagan, British Columbia, the fruit being badly scarred and misshapen. In one orchard 56 percent of the crop of 5 acres of young peach trees was culled on account of this injury.

The woolly apple aphid is again scarce in the Okanagan Valley, British Columbia, owing to natural enemies, including the introduced parasite Aphelinus mali Hald.

The known distribution of the European spruce sawfly has been greatly extended. It has been found in an elliptical area in southern Ontario, extending from Hamilton north to Muskoka and from Stratford east to Peterborough. Individual larvae have also been received from Gracefield in the Gatineau Valley, Quebec, and from Hawk Junction on the Algoma Central Railway. In general the infestation in the southern part of the Gaspe area, Quebec, and in the northern part of New Brunswick was less this year, owing, apparently, to the abnormally high percentage remaining in diapause. In southern New Brunswick there was a general increase. A noticeable increase in the number of dead trees was recorded in the Gaspe.

The dying of birch is becoming an important problem, particularly in southern New Brunswick. The dying trees generally have the appearance of having been attacked by the bronze birch borer, and all those examined showed evidence of the work of this insect.

GENERAL FEEDERS

GRASSHOPPERS (Arididae)

Illinois. W. P. Flint (September 23): Fall surveys to date show grasshoppers in about normal or subnormal numbers in the State.

Missouri. L. Haseman (September 21): A survey of adult-grasshopper abundance has been completed and, except for a few scattered areas, particularly in north-central Missouri and a few counties through the central part of the State south of the Missouri River, records indicate that grasshoppers are back to normal and not seriously threatening. Preliminary check-ups on egg abundance indicate that conditions have been favorable for egg deposition, and in a few counties where the pest has been most abundant a fairly heavy crop of eggs is expected to be carried over the winter.

Arkansas. D. Isely (September): The red-legged grasshopper (Melanoplus femur-rubrum Deg.) has become the most numerous species during September.

Oklahoma. C. F. Stiles (September 22): Population greatly decreased over the eastern half of the State by poisoning and by natural enemies. In the Panhandle the migratory grasshopper (Dissosteira longipennis Thos.) is doing considerable damage. Flights of these grasshoppers have occurred since July 20 and they are now depositing eggs over a large part of the Panhandle. The species is generally distributed over the western quarter of the State. Some large egg beds already reported.

Texas. F. L. Thomas (September 22): Grasshoppers, D. carolina L. and M. differentialis Thos., abundant in Sudan grass in Hardeman County.

Arizona. L. O. Barnes (August 31): At Tempe, Maricopa County, the late nymphal instars and the adult stage of M. differentialis caused severe damage, up to 60 percent, in a few alfalfa fields during the growth of the third hay crop early in July. Populations of 35 per square yard observed. Much feeding and considerable damage to the foliage of the fourth alfalfa crop has continued in certain areas during August. In one quarter-section the average number of hoppers of this species increased from 3.46 per square yard, found during the adult survey in 1937, to 9.9 per square yard in 1938. Migrations were not a factor in causing the change in population density. On August 25 two large alfalfa fields in the South Gila Valley, 6 miles east of Yuma, had mixed infestations of adults of M. mexicanus Sauss. and M. differentialis, the hopper populations being estimated at six and eight per yard, respectively. In a 300-acre tract of alfalfa located 12 miles east of Yuma, Yuma County, a third general hatch of M. mexicanus was well under way on August 24-25. Populations of first- and second-instar nymphs ranged from 1 to 25 per square yard. No early instar nymphs were present on August 2. Rainfall for the 3-day period August 5-7 was 2.41 inches in a very small area that included this 300-acre alfalfa field, 1.76-inches falling within 1 hour on August 7. In 1936 and 1937 the third general hatch of M. mexicanus did not begin until September. In those years precipitation from July to October did not exceed 0.6 inch. These unusual and

excessively heavy rains early in August apparently altered soil conditions enough to stimulate hatching of M. mexicanus eggs, thereby advancing the date for the beginning of the fall hatch by 3 to 5 weeks. A total of 2,000 acres of cultivated, idle, and reverted lands was examined in search of grasshoppers at Chino Valley, Yavapai County, on August 15-17. M. lakinus Scudd. was the dominant species. Average nymphal populations were: 5 per square yard in alfalfa, 18 in Russian-thistle reversion, and 14 per square yard along weedy and grassy field edges. Maximum populations in alfalfa exceeded 30 per square yard and defoliation due to feeding reached 15 percent in such fields. Populations in excess of 100 per square yard recorded in some Russian-thistle areas and along some fence rows. Damage to pinto-bean foliage reached 10 percent when the beans were adjacent to large areas of Russian-thistle. Light hatching of M. lakinus began early in July, following light rains on June 28 and 29. Main hatching season started immediately following a heavy rain on July 26. Of 80 egg pods examined on July 29, 7.5 percent had hatched or were hatching. By August 15-17, 80 percent of the eggs had hatched and hoppers were present from the first nymphal instar to the adult stage, there being very few adults but many second- to fourth-instar nymphs.

Minnesota. A. G. Ruggles and assistants (September): Grasshoppers are still active, being reported from scattered localities throughout the State. Most of the reports are from the southern half of the State.

Montana. H. B. Mills (September 23): There is little evidence of the large grasshopper flight that invaded Montana in July. Large numbers flew on to the north, out of Montana, and those remaining have been dying off steadily until, on September 12-14, counts of two or three hoppers per square yard were the rule throughout large areas in northeastern Montana. Sarcophagids have been responsible for a large part of this reduction. Egg laying, however, was intense in many areas. Beeflies and blister beetles have in some localities destroyed at least 40 percent of the eggs.

Utah. G. F. Knowlton (August 27): Eggs are still hatching in some fields examined at Garden City, Randolph, Woodruff, and Huntsville, northern Utah, some farms being largely infested by small nymphs. Egg laying has been going on for several weeks in most parts of the State. (September 20): Injury is still occurring in some northern localities. Egg laying is occurring generally, with early season species becoming scarce except where hatching was late.

Oregon. D. C. Mote (September): Cannula pellucida Scudd. is on the egg beds. Deposition of eggs is heavy in certain areas of eastern Oregon. Melanoplus spp. are laying generally in margin lands and waste lands throughout the eastern part of the State.

California. Kern County Monthly News Letter (September 6): Grasshopper situation in Kern County about the same as last month, there being more injury from hoppers feeding on blooms of cotton plants than was first anticipated. A few acres of cotton south of Arvin seriously injured. No eggs found.

MORMON CRICKET (Anabrus simplex Hald.)

United States. C. Wakeland (September): Highlights in the year's control program, which is now at an end, are as follows: The almost complete crop protection in all areas where control was adequately planned; the severe defoliation and seed destruction by crickets of range grasses and browse plants; the almost complete eradication of crickets in Moffat County, Colo.; the reduction in populations in several counties in other States, making it possible to attain eradication in 1939; the general reduction of populations, due to control work, in many of the older infested counties; and the material increase in the size of the infested areas in Oregon, North Dakota, South Dakota, and Nebraska.

SUGAR-BEET WIREWORM (Limonius californicus Mann.)

California. M. W. Stone (September 7): Responsible for considerable damage to young sweet corn plants in a 60-acre field near Downey, Los Angeles County.

JAPANESE BEETLE (Popillia japonica Newm.)

New England, New York, and New Jersey. C. H. Hadley (September): In general, an increase in abundance is indicated, as compared with 1937, particularly in Connecticut and at points in western Massachusetts. A heavy but localized infestation found near South Egremont, in the Berkshire area of Massachusetts, had evidently existed for a number of years, being of particular interest in that it occurs in a northern area of relatively high elevation. At points of infestation in New Hampshire and Maine slight-to-general increases in abundance this season were noted. In the New York City area there has been a fairly general increase in the infestation over that observed last year. In that section the general infestation appears to be spreading more rapidly into western Connecticut than in certain portions of its outer limits above New York City. In northern New Jersey only a moderate advance in the other limits was noted at most points. Infestation throughout the greater part of New Jersey less severe than that of 1937. Heaviest infestation, as for the last several years, is centered in portions of Cumberland and Salem Counties, southeastern New Jersey.

ORIENTAL BEETLE (Anomala orientalis Wtrh.)

Connecticut and New Jersey. C. H. Hadley (September): Reports indicate some increase in populations of the oriental beetle in northern New Jersey and southwestern Connecticut, as compared with 1937.

ASIATIC GARDEN BEETLE (Autoserica castanea Arrow)

Connecticut, New York, New Jersey, Pennsylvania, and District of Columbia. C. H. Hadley (September): Reports show a noticeable increase in the population in northern New Jersey, in the area including and surrounding metropolitan New York, and in southwestern Connecticut along Long Island Sound, as compared with last year. Also somewhat more abundant in the immediate vicinity of Riverton, N. J., in parts of Philadelphia, Pa., and in Washington, D. C.

FULLER'S ROSE BEETLE (Pantomorus godmani Crotch)

North Carolina. D. L. Wray (August 29): Extensive damage noted in Wilmington, New Hanover County, on a block of boxwood in a nursery. Large areas, about one-eighth acre, almost completely defoliated by the adults. Large numbers could be collected by jarring the plants.

Georgia. A. L. Brody (September 19): About 50 percent of the rose bushes and 75 percent of the leaves of coffee weed showed feeding signs at Valdosta, Lowndes County.

Alabama. J. M. Robinson (August 31): Attacking azaleas at Headland, Henry County, on August 5. Also reported on tung-oil trees at Citronelle, Mobile County, on August 25.

Mississippi. G. L. Bond (September 23): Specimens taken from verbena at Luce-
dale, George County, on August 22. Plants showed considerable feeding.

Louisiana. C. O. Eddy (September): On tung-oil trees. (Det. by L. L. Buchanan.)

CEREAL AND FORAGE - CROP INSECTS

WHEAT AND OTHER SMALL GRAINS

ARMYWORM (Cirphis unipuncta Haw.)

Maine. J. H. Hawkins (September 24): Second brood of armyworm more abundant than usual on grass and corn in central Maine. As the brood is more widely scattered, the damage is not serious.

Connecticut. E. P. Felt (September 23): Reported as causing some injury to lawns at Ridgefield, Fairfield County.

Tennessee. L. B. Scott (September 19): Reported from several points in Mont-
gomery County, north-central Tennessee, the damage being severe in the com-
paratively few fields attacked.

Missouri. L. Haseman (September 21): Usual flight of moths which generally occurs ahead of frost in central Missouri not taking place this fall.

Nebraska. M. H. Swenk (September 20): Reported on September 14 as having de-
stroyed a field of about 30 acres of volunteer barley in Nuckolls County.

HESSIAN FLY (Phytophaga destructor Say)

Illinois. W. P. Flint (August): Losses from hessian fly this year very light, although some fields suffered an early spring infestation, which necessi-
tated plowing them up. Highest infestation shown by our survey is an aver-
age of 14 percent of all tillers in wheat stubble infested in Clark County.
Other counties showing as high as 10 percent infestation are Edgar, Fulton,
Kankakee, and McDonough. As a result of the survey, serious general damage
is not expected this fall.

Missouri. L. Haseman (September 21): Situation throughout the State apparently rather favorable and no especial drive being made on delaying seeding, except in a few counties in southwestern Missouri, where there was a fair local carryover of flaxseeds in summer stubble.

WHEAT JOINTWORM (*Harmolita tritici* Fitch)

Illinois. W. P. Flint (August): Jointworm of no consequence in any section of the State, except in Randolph County and the adjoining section of southwestern Missouri. In most places less than 1 percent of the tillers is infested.

Missouri. L. Haseman (September 21): Recent stubble surveys throughout central Missouri indicate one of the heaviest infestations that has carried over in stubble in years.

CORN

CORN EAR WORM (*Heliothis obsoleta* F.)

Connecticut. N. Turner (September 20): Very light infestations in sweet corn.

New York. L. A. Carruth (September 27): Less abundant than usual on western Long Island, although serious damage has occurred. During September injury to tomatoes observed for the first time in recent years on western Long Island. On September 17 approximately 15 percent of the ripening tomatoes in a field near Roslyn were infested.

North Carolina. J. F. Cooper (September 23): Severe damage to late corn noted near Spencer. Reports indicate this condition to be general in Rowan and Iredell Counties.

South Carolina. J. G. Watts (September 23): Twenty-five acres of late corn near Cope, Orangeburg County, completely destroyed. In most cases stalks are stripped inside and out. Considerable feeding on the outer surface and tips of okra pods at Blackville, Barnwell County. Little loss was caused by the insect but diseases were established in the seed pod because of it.

Mississippi. C. Lyle (September 23): Field of tomatoes in Madison County reported as showing at least 25 percent damage. A few reports of worms as completely ruining late corn were received from the Moss Point district, Jackson County. Reported as abundant in late corn in northwestern Mississippi and as ruining fields of late corn in Webster, Choctaw, and Winston Counties.

E. W. Dunnam and J. C. Clark (September 24): Causing serious damage to late-planted corn in Washington County.

Ohio. T. H. Parks (September 23): A few migrant moths noticed at street lights and taken in an insect-electrocutor trap early in September. Very little injury to corn or tomatoes throughout the season.

Missouri. L. Haseman (September 21): Late sweet corn and, in places, tomatoes show a heavy infestation, even where earlier summer generations were light.

Utah. G. F. Knowlton (September 14): Injury to sweet corn has increased during recent weeks in Cache, Box Elder, and Salt Lake Counties, although still below the level of the preceding 2 years. Counts in tomato fields at Lewiston, Cache County, showed injury to be light, seldom exceeding 1 percent.

FALL ARMYWORM (Laphygma frugiperda S. & A.)

Maine. J. H. Hawkins (September 24): Considerable loss to farmers and anxiety to canners in central Maine because of injury to corn ears.

J. V. Schaffner, Jr. (September 12): Heavy infestations reported in Knox County. Serious damage caused to sweet corn in the vicinity of Union.

Connecticut. N. Turner (September 20): Many ears ruined on late sweet corn at Mount Carmel Farm, southern Connecticut.

New York. L. A. Carruth (September 27): More abundant than usual on western Long Island. Serious foliage injury to young corn plants generally observed during August. Injury to sweet corn ears increasingly serious as the season progressed, the injury in most cases being similar to that caused by the corn ear worm, although the fall armyworm tended to do more damage to the husks and to the lower parts of the ears. One hundred ears approaching maturity were examined on September 24 and showed infestation of 92 percent, either of corn ear worms or fall armyworms. Out of the total of 164 worms found, 33 were corn ear worms and 131 fall armyworms. Larvae of all stages are present in considerable numbers. Egg masses and moths more common in corn-fields than ever before observed by the writer.

North Carolina and South Carolina. W. A. Shands (September 1): Very severe injury caused to late corn over the area between Oxford, northern North Carolina through the State to Florence, S. C. General distribution all over the fields. (Det. by C. Heinrich.)

Georgia. T. L. Bissell (September 2): About an acre of gladiolus ruined at Hapeville, Fulton County, by feeding on flowers, flower stalks, and leaves. Beginning to feed in dahlia blooms on the same property. Infestation may have started in grass on the terraces, yet the gladioli have been fed on much more heavily than the grass. (September 8): Found on cotton and pepper at Experiment and Zebulon, central Georgia. (September 22): Newly hatched larvae on collard just sent in from Clarkston, DeKalb County. Moths laying eggs on screens and other places around homes at Experiment. On September 18 a large colony was found in a clothes closet, presumably from eggs brought in on a badminton net.

Mississippi. C. Lyle (September 23): Rather heavy damage to lawn grasses within Jackson City limits, Hinds County, reported on September 3. Heavy damage to late corn reported recently in Aberdeen, Monroe County, and Poplarville, Pearl River County.

Louisiana. C. O. Eddy (September): Abundant in fall corn.

Missouri. L. Haseman (September): Numerous complaints throughout the State since September 1 of injury by the fall armyworm in the tips of late field and sweet corn. Infestation at Columbia began late in August, the larvae developing rapidly, and pupation and emergence occurring since the middle of the month. Larvae still working in the tips of corn. Never before seen so abundant and so injurious in the tips of late corn.

Kansas. W. T. Emery (September 21): Larvae common in the immature field corn in the vicinity of Manhattan, Riley County.

Texas. F. L. Thomas (September 22): Injuring corn and hegari in Dickens, Hardeman, and Wichita Counties.

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

Maine. J. H. Hawkins (September 24): Increase in European corn borer in the canning areas of the State, in Waldo and Penobscot Counties, is alarming, except in the Fryeburg area, Oxford County, where it is reported as being under control.

Connecticut. N. Turner (September 20): Late corn very heavily infested in many parts of the State. Untreated corn in East Hartford, Milford, and Westport showed 100-percent ear infestation, and from 1 to 10 borers in each ear. At Mount Carmel there were 18 borers per plant and 3 borers per ear in late sweet corn (average for 100 plants taken at random). Less than 5 percent of the ears borer-free. Seed corn in Milford damaged 25 percent of the yield on 20 acres of hybrid seed. Various other crops seriously affected, a planting of raspberries in Newington, Hartford County, showing a heavy infestation in canes. Dahlias, hollyhocks, and asters seriously damaged. Tomato vines and fruit attacked in one garden.

New York. L. A. Carruth (September 27): On Long Island 90 to 100 percent of sweet corn plants are infested with second-brood borers, at the rate of about 600 larvae per 100 infested plants. Serious injury to dahlias observed. Early in September some plantings were from 30 to 50 percent infested. Infestations particularly serious because of the loss of bloom. In Columbia County (Hudson Valley) about 75 percent of stalks in a large cornfield were infested at the rate of about 750 larvae per 100 infested plants. Fields in Albany County were from 50 to 100 percent infested, with from 300 to 1,250 larvae per 100 infested stalks.

Ohio. T. H. Parks (September 23): While damage to corn is present in several counties of northwestern Ohio, yield losses will not be great and will be limited principally to the earliest planted corn. One field in Wood County observed on September 16 to have 22 percent of the stalks broken at or below the ear, owing to borer injury.

Indiana. J. J. Davis (September 27): With the center of infestation in Allen and Adams Counties, eastern Indiana, observations continue to emphasize the great increase of corn borer during the last year. In one field examined last week in Adams County every stalk was infested, with an average of 4 borers per stalk.

CHINCH BUGS (Blissus leucopterus Say)

Iowa. C. J. Drake (September 15): Weather conditions very favorable for the second generation of chinch bugs in southern Iowa, particularly in the southwestern part of the State, and many farmers report slight commercial damage. In a few instances entire fields have been badly injured.

Missouri. L. Heseman (September 21): Recent reports indicate the chinch bug as going into the winter in goodly numbers in a few counties in the north-central part of the State, as well as in a few of the counties south of the Missouri River. However, there are no indications of any serious general carry-over of bugs throughout the State.

Oklahoma. R. G. Dahms (September 20): Third-generation nymphs are abundant on late-planted sorghums in southwestern Oklahoma.

CORN LEAF APHID (Aphis maidis Fitch)

Wisconsin. C. L. Fluke (September 21): A severe outbreak, the heaviest noted in the last 22 years, occurred in all parts of the State where corn is grown. Definite reports chiefly from the southern and western counties.

Minnesota. A. G. Ruzales and C. E. Mickel (September 13): Reported on corn, and as causing a lot of worry to farmers, especially in the southern half of the State.

Nebraska. M. H. Swenk (September 20): Reported from Cass County on September 19 as injuring the tassels of corn.

Oklahoma. R. G. Dahms (September 20): Present on sorghums throughout southwestern Oklahoma.

CORN LANTERN FLY (Peregrinus maidis Ashm.)

Alabama. J. M. Robinson (August 31): Found on corn at Atmore, Escambia County, on August 24.

BUMBLE FLOWER BEETLES (Euphoria spp.)

North Carolina. C. S. Brimley (September 14): E. sepulchralis F. reported as eating out bud and tassel of corn on farm at Wake Forest, Wake County. Damage severe.

Alabama. J. M. Robinson (August 31): Bumble flower beetle (E. inda L.) reported in cotton boll at Fort Payne, De Kalb County, on August 20.

Wisconsin. C. L. Fluke (September 21): Adults (E. inda) extremely numerous in Richland and Marathon Counties, feeding on ears of field corn in the milk.

ALFALFA AND CLOVER

BEET WEBWORM (*Loxostele sticticalis* L.)

Arizona. O. L. Barnes (August 31): Adults and larvae present in all alfalfa fields examined in the Roll district, Yuma County, southwestern Arizona, on August 26. Damage caused by larval feeding slight, however, and adults did not appear to be thickly concentrated at any location visited. Quite numerous in several alfalfa fields at Chino Valley, Yavapai County, southwest of central Arizona, on August 19. (Det. by C. Heinrich.)

Utah. G. F. Knowlton (September 12): Ten acres of young alfalfa completely destroyed at Circleville, Piute County, south-central Utah. (September 14): Still active in beet and alfalfa fields, and on Russian-thistle in northern Utah.

ALFALFA CATERPILLAR (*Eurytus eurytheme* Bdv.)

California. A. E. Michelbacher (September 22): Serious damage in parts of the San Joaquin Valley, central California, by larvae of the alfalfa butterfly. In some fields disease and parasites apparently reduced the population of larvae to a point where they were unable to cause any economic damage.

ALFALFA WEEVIL (*Hypera postica* Gyll.)

California. A. E. Michelbacher (September 22): Larvae present during most of the summer in several fields in the San Joaquin Valley. As late as September 13 in 1 field an average of 17 larvae were collected to 100 sweeps of an insect net.

A LEAF BEETLE (*Colaspis viridiceps* Schaeff.)

Arizona. O. L. Barnes (August 31): At Roll, Yuma County, adults were feeding on the foliage of young alfalfa on August 26. One field, where the crop was in the prebloom stage, showed foliage injury estimated at 10 percent. Where the plants were more advanced in development, the damage was less.

PEA APHID (*Illinoia pisi* Kltb.)

Maine. J. H. Hawkins (September 24): Present in clover planted with late cannery peas in Exeter, Penobscot County. Clover in early and mid-season cannery peas on the same farm not heavily infested.

Utah. G. F. Knowlton (September 14): Abundant on succulent alfalfa at Wellsville and Hyde Park, Cache County, and Nibley, Sevier County.

A TRYPETID (*Stenopa vulnerata* Loew)

North Carolina. G. B. Merrill (August): Very numerous this year, as last, in the Valle Crucis area, Watauga County, at an elevation around 3,000 feet. Swept from red clover fields, or fields in which red clover was scattered.

SOYBEAN

GREEN CLOVER WORM (Plathypena scabra F.)

Indiana. J. J. Davis (September 3): Larvae received from Campbellsburg, Washington County. Had infested an acreage of soybeans and suddenly died of a fungus disease, owing, no doubt, to excessive rains. The fungus was determined by V. K. Charles as Spicaria rileyi.

COWPEAS

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Texas. J. N. Roney (September 22): Infestation on cowpeas in Galveston County.

COREIDS (Alydus spp.)

Georgia. T. L. Bissell (August 29): Adults of A. eurinus Say and A. pilosulus H. S. rather common on cowpea pods at Experiment, central Georgia.

VETCH

VETCH BRUCHID (Bruchus brachialis Fahr.)

Oregon. L. P. Rockwood (September 6): On August 27 a commercial seed analyst discovered live specimens of a bruchid in three samples of hairy vetch seed. Upon tracing the infested seed to its source, it was found to have originated on three separate farms located in northern Clackamas County, which contains no vetch acreage of commercial importance and for that reason had not been under the close surveillance exercised recently over the important vetch-seed-producing counties of the State. A hasty survey of seed-cleaning mills resulted in the further discovery of five additional lots of infested seed from Clackamas County and one from Marion County, respectively. (Det. by H. S. Barber.)

Washington. M. Reeher (September 20): More recent inspections have resulted in the finding of adults on windows and sacks of vetch seed in seed cleaning mills at Vancouver, Clark County, and Woodland, Cowlitz County, Wash. It was not possible to determine from what farms the seed came, but there is no doubt that it originated in either Clark or Cowlitz County, or in both. The present known distribution, therefore, apparently extends about 25 miles north and south of Portland, Oreg.

SORGHUM

SORGHUM WEBWORM (Celama sorghiella Riley)

Arkansas. D. Isely (September 22): There has been an outbreak in the northern counties of Arkansas, resulting in a loss of 25 to 50 percent in the weight of heads in many fields.

Texas. R. K. Fletcher (September 22): Reported as causing injury to hegari in Gonzales County.

GRASS

A LOOPER (Mocis repanda F.)

Texas. S. E. Jones (September 22): Destructive to grain crops, Sudan grass, Johnson grass, and other grasses in Zavala, Dimmit, and La Salle Counties.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis F.)

Louisiana. B. A. Osterberger (September): Infestation as a whole very light, with a few heavily infested areas. Cane borer egg parasite, Trichogramma sp., very active, with better than 86-percent parasitization of all eggs collected.

F R U I T I N S E C T S

LESSER APPLE WORM (Grapholitha prunivora Walsh)

Maine. F. H. Lathrop (September 23): There is a distinct increase in infestation of apples in the south-central and western parts of the State, as compared with that in the last few years. Infested plums received from Waterville, Kennebec County.

YELLOW-NECKED CATERPILLAR (Datana ministra Drury)

Connecticut. E. P. Felt (September 23): Reported as abundant and somewhat injurious on apple trees at Old Lyme, New London County.

Virginia. A. M. Woodside (September 22): Some young apple trees in the vicinity of Waynesboro, Augusta County, defoliated.

Minnesota. A. G. Ruggles and C. E. Mickel (September 13): Reported from the south-central part of the State.

RED-HUMPED CATERPILLAR (Schizura concinna S. & A.)

Connecticut. E. P. Felt (September 23): Reported as somewhat abundant in a number of localities in southern Connecticut, feeding mostly on small apple trees.

HOWARD'S SCALE (Aspidiotus howardi Ckll.)

Texas. O. G. Babcock (September 15): Severe on scattered plum and peach trees at Sonora, Sutton County. Some trees killed.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Georgia. O. I. Snapp (September 19): The San Jose scale on peach trees increased rapidly during August and September in central Georgia. The infestation in a few orchards has reached a stage of encrustation; however, the general infestation in central Georgia is not greater than that of an average year.

Missouri. L. Haseman (September 21): Throughout the State as a whole this scale apparently is not serious, although it is threatening in some orchards.

MITES (Tetranychus spp.)

Washington. E. J. Newcomer (July): The Pacific mite (T. pacificus McG.) is attacking apple in Yakima and Wenatchee Valleys. Very common throughout central Washington and probably as abundant as usual. (Det. by E. A. McGregor.)

Oregon. E. J. Newcomer (July): Specimens of the Willamette mite (T. willamettei McG.) collected for identification from Medford and Talent, Jackson County, on July 7, 13, and 14. (Det. by E. A. McGregor.) (July 18): Reported as rather abundant at Hood River, Hood River County, on apple and pear.

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

Virginia. A. M. Woodside (September 22): Infestation increased rapidly during August. Total infestation in Augusta County probably heavier than for any season since 1933.

Ohio. T. H. Parks (September 23): Peak of second-brood bait-pan catch at Columbus on August 8. Many new entrances noticed by growers, beginning the middle of the month. Apple crop now being harvested not suffering seriously, except in orchards where the insect has been a serious problem for several years. Control in Lawrence County, southern Ohio, much better than last year, most severely infested orchard having 34 percent of the fruit blemished with stings, while the lightest crop infestation was 6 percent.

Tennessee. G. M. Bentley (September 26): Apples from uncared-for orchards in isolated mountain districts show infestations of the second brood.

Missouri. L. Haseman (September 21): In unsprayed orchards a heavy carry-over of larvae expected this winter. August and early September generation of larvae a little late in maturing. Peak of moth emergence in central and northern Missouri occurred during the last few days of August and the first week in September. Normally this peak occurs around August 15 to 20 in central and northern Missouri. In southern Missouri the peak of moth emergence occurred a week earlier.

Kansas and Missouri. H. Baker (September 26): Third-brood larvae caused considerable damage during the first half of September. Bait-trap catches of moths held to a high level until September 13, since which time smaller catches have been and are still being taken. Reported from northeastern Kansas and northwestern Missouri.

Washington. E. J. Newcomer (September 15): Reported from Yakima on apples and pears. Hot weather during the last week has resulted in renewed activity of the codling moth.

Oregon. D. C. Mote (September): At peak of second generation about August 15. Very abundant during season.

FRUIT TREE LEAF ROLLER (Cacoecia argyrospila Walk.)

Missouri. L. Haseman (September 21): From the unusually heavy infestation last spring throughout the State, a heavy carry-over of egg packets may be expected this winter.

OBLIQUE-BANDED LEAF ROLLER (Cacoecia rosaceana Harr.)

Washington. E. J. Newcomer (September 12): This species has been reared from larvae sent from Hanford, Benton County. Reported as very abundant on apple.

APPLE LEAF SKELETONIZER (Psorosina hammondi Riley)

Missouri. L. Haseman (September 21): During the month complaints of severe foliage injury received from the various orchard centers of the State, but it seems particularly injurious in central and northern Missouri. Favorable conditions provided for this pest in young and unsprayed orchards.

Nebraska. M. H. Swenk (September 20): Hawthorn tree in Burt County reported on September 14 as being attacked.

FLATHEADED APPLE TREE BORER (Chrysobothris femorata Oliv.)

Missouri. L. Haseman (September 21): Recent check-ups in orchards in central Missouri reveal that there is a very light carry-over of borers.

Nebraska. M. H. Swenk (September 20): Complaints of damage continued to be received from August 21 to September 20, coming chiefly from Lincoln and Morrill Counties.

ROUNDHEADED APPLE TREE BORER (Saperda candida F.)

Missouri. L. Haseman (September 21): A moderately heavy infestation in some orchards in the vicinity of Columbia. Most of the borers now average $\frac{1}{2}$ inch to $\frac{3}{4}$ inch in length, and are preparing for the winter.

APPLE CURCULIO (Tachypterus quadrifasciatus Say)

Wisconsin. C. L. Fluke (September 21): Increase of fall adults and fall injury quite common in Richland and Crawford Counties.

APPLE MAGGOT (Rhagoletis pomonella Walsh)

Maine. F. H. Lathrop (September 23): There has been a distinct increase in the amount of injury to apples in south-central and western Maine this year, as compared with 1936 and 1937. The injury to blueberries in eastern Maine also increased this year, as compared with the last few years.

Michigan. R. Hutson (September 27): Infestations observed at Grand Rapids, East Lansing, Saginaw, Owosso, and Battle Creek.

WHITE APPLE LEAFHOPPER (Typhlocyba pomaria McAtee)

Maine. F. H. Lathrop (September 14): The infestation has increased on apples near Monmouth, south-central Maine, as compared with the last 3 years. The leafhoppers are now almost entirely in the adult stage, although a very few last-stage nymphs are present. No evidence of deposition of winter eggs yet.

Connecticut. P. Garman (September 22): Reported from New Haven County. In general, less abundant than usual. A few growers reported threatening infestations in August.

Virginia. A. M. Woodside (September 22): Abundant in some orchards in Augusta County.

PEACH

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Connecticut. P. Garman (September 22): Average infestation throughout the State about twice that of last year. Parasitization in general very low. Some secondaries showing in collections from various orchards.

Georgia. O. I. Snapp (September 19): Infestation in peach nursery stock at Fort Valley, central Georgia, not so heavy as usual.

T. L. Bissell (September 20): The shoots of a shrub, Photinia serrulata, heavily infested by caterpillars that resemble those of the oriental fruit moth. The larvae tunnel the ends of the shoots and also mine the bark. Almost every shoot has one or more larvae. They do not desert infested shoots, as in peach. Infestation observed at Experiment, September 14-20.

Mississippi. E. W. Dunnam and J. C. Clark (September 27): This insect has caused serious damage to the twigs of peaches, both commercial and ornamental, and the larvae are yet damaging photinia shrubs.

Ohio. T. H. Parks (September 23): Damage in Ottawa County to peaches much less than a year ago. No serious losses incurred.

Mississippi. C. Lyle (September 23): Reported as having done moderate damage to peach trees during the last month in the Brookhaven and Jackson districts, Lincoln and Hinds Counties, respectively. Specimens accompanied by complaints of damage received from Alcorn, Ferrest, Monroe, Copiah, and Chicasaw Counties.

PEACH BORER (Conopia exitiosa Say)

Georgia. O. I. Snapp (September 19): Second-generation pupae taken from 1- and 8-year-old peach trees in orchards at Fort Valley. However, the number was an insignificant fraction of the total population. The peak of pupation and moth emergence occurred a little later than usual. The infestation was moderate, or about that of an average year.

Oklahoma. F. A. Fenton (September 20): Reported at Owasso, Tulsa County.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Maine. F. H. Lathrop (September 23): There is a distinct increase in the amount of injury to apples in south-central and western Maine, as compared with the last 4 or 5 years.

Michigan. R. Hutson (September 27): Infestations evident on apples practically all over the State. Injury in the form of feeding punctures especially noticeable.

Georgia. O. I. Snapp (September 19): Most of the adults have left peach orchards at Fort Valley for places of hibernation.

TARNISHED PLANT BUG (Lygus pratensis L.)

Ohio. T. H. Parks (September 23): Injury to green peaches severe in an orchard in Fairfield County, southeastern Ohio.

CHEERY

CHEERY MAGGOT (Rhagoletis cingulata Loew)

Oregon. D. C. Mote (September): Found in normal abundance in the Willamette Valley and in Union County, northeastern Oregon. Damage only serious where trees were not sprayed.

PEAR SLUG (Eriocampoides limacina Retz.)

Utah. G. F. Knowlton (September 8): Seriously damaging the foliage of ornamental hawthorn at Smithfield, Cache County.

Washington. B. J. Landis (September 20): Somewhat abundant on some cherry trees in Puyallup, Pierce County.

A BEETLE (Syneta albida Lec.)

Oregon. D. C. Mote (September): Heavy on cherries in the Willamette Valley, doing serious damage.

GRAPE

GRAPE LEAF FOLDER (Desmia funeralis Hbn.)

Texas. F. L. Thomas (September 22): Reported on grapes in Comanche County.

California. E. O. Essig (September 10): Defoliating vineyards in great abundance in certain areas of the San Joaquin Valley and doing considerable damage.

EIGHT-SPOTTED FORESTER (Alypia octomaculata F.)

Texas. O. G. Babcock (September 15): Severe on native and cultivated grapes in the vicinity of Sonora during the first 3 weeks in August.

GRAPE SAWFLY (Erythraspides pyamaea Say)

Virginia. C. R. Willey (September 2): Larvae and adults of a sawfly collected at Glade Spring, Washington County, where they had defoliated several large grapevines. (Larvae det. by R. A. Cushman; adults det. by G. A. Sandhouse.)

GRAPE PHYLLOXERA (Phylloxera vitifoliae Fitch)

New York. E. P. Felt (September 23): Galls in some abundance reported from near Farmingdale, Long Island.

RASPBERRY

RASPBERRY CANE BORER (Oberea bimaculata Oliv.)

Minnesota. A. G. Ruggles and C. E. Mickel (September 13): Reported as damaging raspberry all over the southern part of the State.

RASPBERRY ROOT BORER (Bembecia marginata Harr.)

Washington. W. W. Baker (September 20): Adults began to emerge during the first 2 weeks of August and most of them had emerged by the last week of August. First eggs were found on August 9. Eggs parasitized by Telenomus sp. observed first on August 24. In collections of eggs made on September 16 the parasitization ranged from 6.7 to 41.4 percent.

PECAN

CASEBEARERS (Acrobasis spp.)

Florida. S. O. Hill (September 24): Owing to the unseasonably dry weather in the Monticello district, Jefferson County, and the consequent drying up of the leaves, the nut casebearer (A. caryaefoliella Clem) and the pecan leaf casebearer (A. juglandis LeB.) went into hibernation early. A few hibernacula observed late in July, and a considerable number went into hibernation during August and the first part of September.

PECAN CIGAR CASEBEARER (Coleophora caryaefoliella Clem)

Texas. R. K. Fletcher (September 22): Sent in from Webb County.

PECAN APHIDS (Aphidae)

Mississippi. C. Lyle (September 23): Specimens of Longistigma caryae Harr. sent in on August 30 from Itta Bena, Leflore County, with the report that they were very abundant on pecan trees. Pecan leaves showing injury by Melanocallis caryaefoliae Davis received from Laurel, Jones County, on September 8.

CITRUS

WHITEFLIES (Dialeurodes spp.)

Georgia. S. B. Fenne (September 20): Injury to Satsuma oranges and Camellia japonica continues to be severe.

Florida. J. R. Watson (September 24): Maximum emergence of D. citri Ashm. in Alachua County about September 10. Brood apparently heavier than in other years.

Mississippi. C. Lyle (September 23): Whiteflies (D. citri) reported as very abundant on ornamentals in southwestern Mississippi. Also annoying in homes and stores, especially late in the evening, when millions are in the air. Reported as very abundant in Poplarville during September and as moderately abundant on Cape-jasmine in central Mississippi.

Louisiana. C. O. Eddy (September): There has been a large flight of whiteflies during the last 2 weeks.

PURPLE SCALE (Lepidosaphes beckii Newm.)

Florida. M. R. Osburn (September 19): Heavy infestations noted on oranges and grapefruit in central Florida.

CITRUS RUST MITE (Phyllocoptes oleivorus Ashm.)

Florida. J. R. Watson (September 24): Owing to the unseasonably dry weather in August, rust mites were abundant in a large part of the Citrus Belt, particularly in the central counties.

M. R. Osburn (September 13): Infestations are on the increase again, after the natural summer slump.

FIG

RED-SHOULDERED PLANT BUG (Thyanta custator F.)

California. G. H. Kalostian (August 15): Found feeding on fallen dried figs by a grower in Fresno County. The figs being fed on had previously been injured by darkling beetles and by rabbits or squirrels.

MEALYBUGS (Coccidae)

Mississippi. G. L. Bond (September 23): Fig trees in Pascagoula, Jackson County, heavily infested with mealybugs.

COCONUT

DESTRUCTOR SCALE (Aspidiotus destructor Sign.)

Florida. M. R. Osburn (September 17): Numerous on coconut palms at Miami and Hollywood, southern Florida.

T R U C K - C R O P I N S E C T S

STRIPED CUCUMBER BEETLE (Diabrotica vittata F.)

Ohio. N. F. Howard (September 21): Striped cucumber beetle still numerous in the vicinity of Columbus.

Missouri. L. Haseman (September 21): Very numerous on late cucurbits. Now confining their feeding largely to late blossoms. Numbers indicate a heavy carry-over.

Louisiana. C. O. Eddy (September): Cucumber roots being attacked by the larvae of a species of Diabrotica.

Texas. J. N. Roney (September 22): On cantaloups and cucumbers in Galveston County.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata F.)

South Carolina. J. G. Watts (September): Present in a 10-acre field of summer crookneck squash at Ridgeland, but not abundant early this month. At Blackville they were abundant early in the month on cucumbers but have been decreasing in numbers since that time. They were never abundant on fall cantaloups. This has been the most abundant species of Diabrotica in this section since early spring until this month, when it has been far outnumbered by D. balteata Lec. Still getting several hundred at trap light every night.

Mississippi. C. Lyle (September 23): Injury to corn silks and gourds reported recently from Crystal Springs, Copiah County.

Illinois. W. P. Flint (September 23): One report received of serious damage by the southern corn rootworm to early planted field rye. The larvae had destroyed large areas of rye over the entire field. The rye was planted following soybeans.

Missouri. L. Haseman (September 21): Now confining their feeding largely to late cucurbit blossoms, their numbers indicating a heavy carry-over.

Texas. J. N. Roney (September 22): Reported on tomato and eggplant in Galveston County.

BANDED CUCUMBER BEETLE (Diabrotica balteata Lec.)

South Carolina. J. G. Watts (September): At Ridgeland during the early part of the month this insect was extremely abundant and doing serious damage to squash. At Blackville the population steadily built up on cucumbers and cantaloups through the early and middle parts of the month, but during the last 10 days there has been little change. Considerable injury was done to cucumbers but cantaloups did not suffer. Most abundant of three species of Diabrotica on cucurbits.

Mississippi. C. Lyle (September 23): Injury to corn silks and gourds reported recently from Crystal Springs, Copiah County.

Louisiana. P. K. Harrison (September 17): Adults doing considerable injury to cucumber foliage and blossoms at Baton Rouge.

Texas. J. N. Roney (September 22): Reported on cowpeas, eggplant, pepper, mustard, and cabbage in Galveston County.

WESTERN SPOTTED CUCUMBER BEETLE (Diabrotica soror Lec.)

California. E. O. Essig (August 30): Serious injury to fruits of apricots and peaches in and around Brentwood and vicinity. Apparently a distinct migration from the warmer parts of the valleys toward cooler areas. Also attacking truck and field crops and flowers in the lower Sacramento and San Joaquin Valleys, and the San Francisco Bay region.

WESTERN STRIPED CUCUMBER BEETLE (Diabrotica trivittata Mann.)

California. M. W. Stone and A. F. Howland (September 9): Over 45 percent of the plants in a 5-acre field of squash near Costa Mesa, southern California, were either dead or dying, as a result of attack by this pest. As many as 12 larvae found feeding on the roots of a single plant. Adults also numerous.

A BEETLE (Lema sexpunctata Oliv.)

Alabama. J. M. Robinson (August 31): Taken at Auburn on August 18, feeding on wandering-jew. Also feeding on vegetables at Auburn.

GREEN STINKBUG (Acrosternum hilaris Say)

Virginia. C. R. Willey and F. R. Freund (September 22): Brought in from Blackstone, Reported as damaging lima beans in that section on August 26.

South Carolina. J. G. Watts (September 21): On September 10 at Ridgeland this insect was present on squash, but no evident damage was resulting. At Blackville on September 21 nymphs and adults were present on cotton in small numbers.

SOUTHERN GREEN STINKBUG (Nezara viridula L.)

Mississippi. C. Lyle (September 23): Severe damage to lima beans reported recently from Braxton, Simpson County.

FALSE CHINCH BUG (Nysius ericae Schill.)

North Carolina. C. S. Brimley (September 14): Sucking the leaves of turnips at Wake Forest, where considerable damage has been done.

A SCUTELLERID (Chelysoma guttatum H. S.)

Georgia. T. L. Bissell (August 29): A number of adults found on croton at Experiment. I had collected only one individual before these.

A STINKBUG (Cosmopepla bimaculata Thos.)

North Carolina. G. B. Merrill (August): Very numerous, especially on mullein, in the Valle Crucis area, Watauga County. Elevation around 3,000 feet.

HORNWORMS (Protoparce spp.)

Georgia. T. L. Bissell (September 3): A few tomato hornworms on pimiento pepper at Experiment, central Georgia. They eat leaves and fruit, feeding largely on the stems and the basal part of the fruit.

Texas. O. G. Babcock (September 15): Very numerous on and doing damage to morning-glories in western Texas.

California. A. E. Michelbacher (September 22): In the Brentwood area during the last week there has been a light build-up of hornworm larvae on tomato, damage done only in isolated spots.

LESSER CORNSTALK BORER (Elasmopalpus lignosellus Zell.)

Virginia. H. G. Walker (August 29): Larvae found at Norfolk attacking strawberry plants near the surface of the ground. They were cutting off the leaves and causing the plants to die. (Det. by C. Heinrich.)

Alabama. J. M. Robinson (August 31): Reported on beans at Fort Payne.

GREENHOUSE WHITEFLY (Trialeurodes vaporariorum Westw.)

Michigan. R. Hutson (September 27): This whitefly destroyed about 3 acres of cucumbers in a field near Grand Rapids, Kent County, during the first part of September.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Tennessee. G. M. Bentley (September 24): Remarkably little injury caused by this insect throughout the State.

Mississippi. J. Milton (September 23): Reported as attacking the fall crop of potatoes in the Jackson district, but no serious damage observed.

Oklahoma. R. G. Dahms (September 20): Reported as doing damage to eggplant in Comanche County.

FALSE POTATO BEETLE (Leptinotarsa juncta Germ.)

North Carolina. G. B. Merrill (August): Fairly numerous on solanaceous plants in the Valle Crucis area, Watauga County. Elevation around 3,000 feet.

WHEAT WIREWORM (Agriotes mancus Say)

Maine. J. H. Hawkins (September 24): Wet weather has caused the infestation in central Maine of ripe and green tomato fruit where the tomatoes are in contact with the soil. The main crop of potato is showing some injury where digging is being done.

POTATO TUBER MOTH (Gnorimoschema operculella Zell.)

North Carolina. Z. P. Metcalf (September 30): Found doing serious damage to Irish potatoes in Gaston County.

Tennessee. G. M. Bentley (September 26): Reported in Lawrence County in very limited numbers. (No host plant given.)

Louisiana. C. O. Eddy (September 1): Potato and moth which emerged from the potato collected at Saint Benedict on August 28. (Det. by A. Busck.)

California. A. E. Michelbacher (September 22): In the San Jose region there is a light infestation on tomatoes.

J. Wilcox (September 15): In the later pickings of one field at Huntington Beach, from 15 to 20 percent of the tomatoes are infested. Infestation apparently started from stored potatoes.

TOMATO PINWORM (Gnorimoschema lycopersicella Busck)

California. A. E. Michelbacher (September 22): In the San Jose region only a single larva has been taken on tomatoes.

CORN EAR WORM (Heliothis obsoleta F.)

Virginia. H. G. Walker and L. D. Anderson (September 27): A field of snap beans in the Western Branch section of Norfolk County was very seriously injured with what appeared to be the corn ear worm.

California. J. Wilcox and M. W. Stone (September 19): The first three pickings in a 20-acre field at Garden Grove, southern California, of medium-to-late tomatoes in the plots dusted with cube (checks) averaged 35-percent infestation, this being heavier than that in any of the early fields.

A. E. Michelbacher (September 22): Infestation not serious in the northern tomato-producing section of the State. On September 8 a survey made in the southern end of the Santa Clara Valley showed infestation ranging from 0 to 2 percent. In fields around San Francisco Bay infestation was late in starting. At San Jose, where tomatoes are usually seriously attacked, it was not necessary to dust until September 1. Infestation at Pleasanton is light, averaging about 1.5 percent in undusted fields. Infestation slowly building up in the Brentwood area. Survey made on September 21 showed infestation ranging from 2 to 3 percent in undusted fields.

EUROPEAN CORN BORER (*Pyrausta nubilalis* Hbn.)

Massachusetts, Connecticut, and New York. A. M. Vance (September): Very definite increases in infestation in potatoes in 1938 over 1937 in central Connecticut and west-central Massachusetts, and a significant decrease on eastern Long Island, N. Y. In Connecticut 8 of the fields examined, or 44.4 percent, had populations averaging over 400 borers per 100 plants, and in Massachusetts 5 of the fields, or 27.8 percent, showed infestations of this intensity. Maximum populations in individual fields of potatoes in 1938 averaged 870 and 860 borers per 100 plants in Connecticut and Massachusetts, respectively, with as many as 17 borers being found in a single plant.

POTATO LEAFHOPPER (*Empoasca fabae* Harr.)

Tennessee. G. M. Bentley (September 24): Damaging where growers are not properly equipped to spray.

A MAGGOT (*Hermetia illucens* L.)

Georgia. T. L. Bissell (September 15): Found destroying potatoes placed in a storage loft early in July. Of 25 bushels only 4 bushels remained unharmed. Three bushels of scraps and worms, mostly worms, were gathered. Owner said he has stored potatoes for 15 years in the same place without previous trouble. This time he neglected to dust with lime as had been his practice.

BEANS

MEXICAN BEAN BEETLE (*Epilachna varivestis* Muls.)

Connecticut. N. Turner (September): Second generation caused serious damage to untreated beans.

New York. N. Y. State Coll. Agr. News Letter (September 8): Early maturity of field beans has precluded expected severe defoliation by the second-generation larvae in counties having heavy infestations. Apparently, however, a high percentage of the second-brood larvae will be able to mature into beetles and the population going into winter quarters will be unusually large.

North Carolina. G. B. Merrill (August): Doing severe damage to beans in the Valle Crucis area, Watauga County. More prevalent than during a similar period last year.

Georgia. T. L. Bissell (September 8): Rather numerous on cowpeas and soybeans at Experiment. Most beetles are recently emerged. Few larvae were seen.

S. B. Fenne (September 21): Found in the northern half of the State for years; however, they seem to be adapting themselves to the hotter, southern part of the State. Severe damage reported from Decatur County.

A. L. Brody (September 19): Fifty percent of the foliage of cowpeas and beggarweeds skeletonized in Valdosta, Lowndes County.

Florida. A. H. Madden (September 20): Abundant in the vicinity of Havana, Gadsden County, and causing severe damage to the fall planting of string beans.

Alabama. J. M. Robinson (August 31): Continues to be abundant at Auburn.

Mississippi. C. Lyle (September 23): Reported for the first time during August in Hinds, Lafayette, and Panola Counties, these points being the western limits of its spread in Mississippi. Heavy damage to snap beans and lima beans reported. Considerable injury to beans observed at Forest, Scott County, during the last month, while the insect is reported as continuing to destroy most of the untreated beans in the Aberdeen territory.

Tennessee. G. M. Bentley (September 24): Considerable damage in the counties of western Tennessee where early applications of dusts or sprays were not made. The infestations in the central and eastern counties have been rather spotty. Little injury where proper attention has been directed to treatment.

Ohio. N. F. Howard (September 21): More numerous in the central and northern parts of Ohio than usual. In the central Ohio area beans that have not been treated have suffered heavy damage, and in some cases have been destroyed.

R. H. Nelson (September 22): Numerous the first week of September in the vicinity of South Point, also egg masses and first-instar larvae common on late-planted beans. Adult population much reduced by September 20, apparently leaving the fields to go into hibernation.

SWEETPOTATO FLEA BEETLE (Chaetocnema confinis Crotch)

Georgia. A. L. Brody (September 19): Old lima beans severely damaged but new lima beans in the same garden only lightly affected at Valdosta.

COWPEA CURCULIO (Chalcodermes aeneus Boh.)

Georgia. S. B. Fenne (September 21): Severe injury found in most of southern Georgia throughout the summer. Many complaints received from growers. Damage to garden beans reported from Decatur County.

BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

Virginia. H. G. Walker and L. D. Anderson (September 27): Several fields of snap beans in Norfolk and Princess Anne Counties rather heavily infested.

Georgia. T. L. Bissell (September 7): Cowpeas planted in July have recently been damaged heavily at Experiment. About 10 percent of the leaf surface has been eaten away. Few beetles are in evidence.

A BEETLE (Strigoderma arboricola F.)

Ohio. R. H. Nelson (July 28): Specimens found on bean plant at North Kenova on July 20. (Det. by E. A. Chapin.)

GREEN STINKBUG (Acrosternum hilaris Sav.)

West Virginia. F. W. Craig (September 23): Reports from several different sections of the State, and the insect evidently rather common on beans in West Virginia at this time. (Det. by H. G. Barber.)

BEAN APHID (Aphis rumicis L.)

Maryland. F. B. Whittington (August 12): Abundant in several fields in Carroll County on canning beans.

CABBAGE

IMPORTED CABBAGE WORM (Pieris rapae L.)

Connecticut. N. Turner (September 20): Locally very abundant on late crops of cabbage, cauliflower, turnips, and broccoli. Many growers report difficulty in controlling them.

New York. N. Y. State Coll. Agr. News Letter (September 8): On September 3 the cabbage worm situation in Monroe County was unusual. Hordes of butterflies laying eggs fairly freely, but bacterial diseases causing heavy mortalities. During the last few days something seems to have slowed up egg deposition.

Virginia. H. G. Walker and L. D. Anderson (September 27): Butterflies rather numerous but caterpillars not abundant enough to cause much damage at Norfolk.

CABBAGE LOOPER (Autographa brassicae Riley)

Virginia. H. G. Walker and L. D. Anderson (September 27): A rather heavy outbreak occurred in many fields of cabbage, collards, and kale in Norfolk and Princess Anne Counties during the early part of September. However, most of the larvae have died with a disease during the last 10 days.

POTATO APHID (Illinoia solanifolii Ashm.)

Georgia. O. I. Snapp (July 15): This aphid had caused considerable damage to collards at Fort Valley, central Georgia. (Det. by P. W. Mason.)

HARLEQUIN BUG (Murgantia histrionica Hahn)

Virginia. H. G. Walker and L. D. Anderson (September 27): In general, these bugs are rather scarce near Norfolk, but they have caused some injury in a field of early cabbage. A grower has reported that they were rather abundant and injurious on his farm near Exmore, on the Eastern Shore of Virginia. Attacking cabbage and other crucifers.

Maryland. E. N. Cory (September 27): Present generally on cabbage.

Tennessee. G. M. Bentley (September 26): Reported on late cabbage and turnips from different parts of the State.

Mississippi. C. Lyle (September 23): Reported as abundant on fall turnips in Senatobia. Complaints of injury recently received from Lowndes and Madison Counties.

Texas. J. N. Roney (September 22): Reported on collards in Galveston County.

SQUASH

SQUASH BUG (Anasa tristis Deg.)

Connecticut. N. Turner (September 20): In general not destructive. A few fields showed a moderate population in September.

South Carolina. J. G. Watts (September): At Ridgeland on squash this insect was common but not abundant. At Blackville, this insect has been scarce on cucumbers and cantaloups.

Ohio. N. F. Howard (September 21): Continues to be numerous in the vicinity of Columbus.

Missouri. L. Haseman (September 21): Where control measures were not applied squash bug now reported as practically ruining late cucurbits, but where early increase was prevented in central Missouri they are very scarce.

Utah. G. F. Knowlton (August 31): From 30 to 150 bugs were found around wilting cantaloup plants in several patches at Bountiful. All plants in one field reported killed and serious injury occurring in several other fields.

SQUASH BORER (Melittia satyriniformis Hbn.)

Texas. R. K. Fletcher (September 22): Reported on squash and cushaw in Galveston County.

MELONS

PICKLEWORM (Diaphania nitidalis Stoll)

South Carolina. J. G. Watts (September 10): At Ridgeland this insect was extremely abundant. At Blackville it was first noticed on late cucumbers late in August. By September 2 they were very abundant and destroying the young fruits before they were 3 inches long. This planting was a total loss. Another planting on July 28 started bearing about September 13 and was at least a 75-percent loss. Cantaloups planted on July 29 had melons the size of golf balls on September 2. A few pickle worms were noticed on September 6 and have continued to increase throughout the month.

Missouri. L. Haseman (September 21): Since about the middle of September late squashes at Columbia show a rather heavy infestation, the late fruits and blossoms providing food. In some cases larvae are maturing in the blossoms without moving to the fruit.

MELONWORM (Diaphania hyalinata L.)

South Carolina. J. G. Watts (September): On September 10 at Ridgeland this insect was extremely abundant on squash. Throughout the day thousands of adults could be seen flying about when the plants were disturbed. On cantaloups at Blackville melonworms first appeared on the fall crop about August 20 but were successfully controlled; however, a few have continued to show up through the month. They were about 10 days later appearing on cucumbers than on the cantaloups.

Louisiana. P. K. Harrison (September 24): Abundant on cucumbers at Baton Rouge.

MELON APHID (Aphis gossypii Glov.)

South Carolina. J. G. Watts (September 15-25): A number of plants scattered generally over the field at Blackville were being severely attacked. At least two predators, Hippodamia convergens Guer. and the larvae of a syrphid fly, were effectively bringing this infestation under control.

Georgia. O. I. Snapp (July 15): This aphid had caused considerable damage to okra at Fort Valley, central Georgia. (Det. by P. W. Mason.)

Nebraska. M. H. Swenk (September 20): Inquiries as to control of the aphid on cucumber and melon vines received from Saline and Hall Counties on August 22 and September 9, respectively.

Utah. G. F. Knowlton and F. C. Harmston (August 30): Aphids are damaging cantaloups, cucumbers, and watermelons at Moab.

ASPARAGUS

ASPARAGUS BEETLE (Crioceris asparagi L.)

South Carolina. J. G. Watts (September): Adults and larvae much less abundant at Blackville than last month. Many fields which were severely damaged during June, July, and August have not put out any appreciable new growth.

TURNIPS

TURNIP APHID (Rhopalosiphum pseudobrassicae Davis)

Tennessee. G. M. Bentley (September 21): Reported as completely killing 6 acres which were planted in turnips at Jefferson City, Jefferson County, the first part of September.

ONIONS

ONION THrips (Thrips tabaci Lind.)

Utah. G. F. Knowlton (September 11): Abundant on onions in northern Utah generally, causing conspicuous silvering.

STRAWBERRY

STRAWBERRY CROWN BORER (Tyloderma fragariae Riley)

Tennessee. G. M. Bentley (September 26): Slight infestations found in Hamilton, Rhea, Meigs, and Roane Counties in the proximity of abandoned fields of strawberries that had not been turned under.

Nebraska. M. H. Swenk (September 20): Reported on September 19 as having damaged strawberry plants in Richardson County.

TOBACCO

TOBACCO FLEA BEETLE (Epitrix parvula F.)

Tennessee. L. B. Scott (September 21): Less abundant in north-central Tennessee than in a normal year. Damage moderate.

HORNWORMS (Protoparce spp.)

North Carolina. G. B. Merrill (August): Tobacco worm (P. quinquemaculata Haw.) moderately abundant on tobacco plants in the Valle Crucis area, Watauga County.

Tennessee. L. B. Scott (September 21): Hornworms less than normally abundant prior to the last week in August when the worms appeared in large numbers. Most of the crop had been harvested. Some of the late-harvested tobacco was seriously damaged in the curing barns.

TOBACCO MOTH (Ephestia elutella Hbn.)

Virginia. C. R. Willey and F. R. Freund (September 22): Larvae were received from Danville on September 8, where they were damaging tobacco, apparently in pack houses. (Det. by W. D. Reed.)

North Carolina. W. H. White (August): The following is taken from E-450, September 1938: "During the latter part of August several reports were received that the tobacco moth was present and injuring tobacco on the sticks in growers' pack houses in North Carolina. The worms or larvae were found by the growers when grading the first curings of tobacco. While the tobacco moth is not a new pest of stored tobacco in this country or in southern Europe, this is the first time the insect has been known to occur in farmers' pack houses and cause any noticeable damage. Over 40 years ago the tobacco moth was known in the United States, but it was not recognized as a pest in tobacco warehouses until 1930, when it was found at Richmond, Va. Since that time the insect has been recognized as a pest of considerable importance in tobacco storage houses and has shown a particular fondness for the imported-cigarette and the flue-cured types of tobaccos."

C O T T O N I N S E C T S

BOLL WEEVIL (Anthonomus grandis Boh.)

South Carolina. J. G. Watts (September 21): Adults abundant in the few remaining blooms and small bolls in the vicinity of Blackville, Barnwell County. As many as 50 to 75 punctures common on small bolls.

F. F. Bondy and C. F. Rainwater (September 3): Not numerous in the fields of Florence County. (September 17): Very numerous, and cotton taking on a second growth, with many squares and an occasional bloom.

Georgia. T. L. Bissell (September 8): Very injurious in central Georgia. Numbers of weevils migrated early this week.

P. M. Gilmer and P. A. Glick (September 4): Third brood apparently much reduced by excessively high temperatures of the last 2 weeks in Lowndes, Echols, Tift, Berrien, and Cook Counties. Migration not going on to any great extent, but total number of weevils in fields considerably reduced by death and spreading out from the more heavily to the more lightly infested areas. (September 18): Weevils again common in the fields of Tift, Lowndes, Cook, Berrien, Turner, and Douglas Counties, indicating that third-brood individuals are now appearing in considerable numbers. Relatively little indication of oviposition. Fall migration apparently well started. Indications that a somewhat heavier than normal brood will go into hibernation.

Florida. L. C. Fife and C. S. Rude (September 3): Infestation heavy in Alachua, Marion, and Gilchrist Counties. Infestation in Lake County increasing, probably because of migration from other heavily infested areas. Infestation in this county so late and so light that no damage is anticipated. (September 10): Large numbers of weevils expected to go into hibernation. Rather heavy parasitization of larvae in many fields. Most common parasite is Microbracon mellitor Say. Others present but none reared to date. (September 24): Little or no change in weevil conditions. New growth in many fields with squares being punctured as fast as they are large enough. This new second growth will undoubtedly be a serious factor in producing overwintering weevils.

Tennessee. G. M. Bentley (September 12): Small numbers occurring in Shelby and Fayette Counties. None reported in the cotton-growing counties.

Alabama. J. M. Robinson (August 31): Considerable damage done to the top crop and part of the middle crop at Auburn, Lee County, and in many adjoining counties.

Mississippi. C. Lyle (September 23): Far more numerous at this time than for several years. All squares and many fairly large bolls being punctured. Number to enter hibernation will be extremely large, in comparison with past years. Fields of late cotton, poisoned too late or not at all, have suffered heavy damage.

R. L. McGarr and C. A. Wilson (September 10): Thick where cotton is still squaring in Oktibbeha and Lowndes Counties. Unless cotton is stripped by leaf worms (Alabama argillacea Hbn.) and weevils starved out, there should be a large number to go into hibernation. (September 17): Late-planted cotton in Oktibbeha and Lowndes Counties made only about half a crop, low production being chiefly due to boll weevil damage.

E. W. Dunnam, et al. (September 10): Very plentiful and found in all types of cotton in Washington County. Squares still available for food, and all squares heavily damaged as a result of weevil feeding. (September 17): Plentiful in almost all fields. Several noted taking honeydew from nectaries on Sea Island cotton, suggesting that satisfactory food is scarce. Second growth noticeable on some cotton. (September 23): Still plentiful in most fields and plenty of food available.

Louisiana. C. O. Eddy (September): Abundant in late cotton.

M. T. Young and assistants (September 10): Found in great numbers in all fields of young cotton in Madison Parish. (September 21): Food for boll weevils very scarce in Madison Parish before the recent outbreak of cotton leaf worm and now almost entirely absent. Defoliation of cotton should greatly reduce the number of weevils entering hibernation. (September 24): Numerous in fields that have not been completely defoliated.

Oklahoma. C. F. Stiles (September 22): Population has increased in the southeastern quarter of the State during the last month. Very little top crop will be produced in many of the southeastern counties.

F. A. Fenton (September 20): Much more abundant in the vicinity of Stillwater, Payne County, than since 1935, despite defoliation of cotton by cotton leaf worm.

Texas. K. P. Ewing, et al. (September 10): Comparatively scarce, although where squares are present on some late-planted cotton, weevils may be found concentrated in fair numbers.

R. W. Moreland, et al. (September 24): Survey of several fields of late-planted cotton in Brazos and Burleson Counties revealed a fairly heavy weevil population.

GRAPE COLASPIS (Colaspis brunnea F.)

Texas. W. S. Millington (September 22): Production in 3 acres of cotton in Brazoria County completely destroyed by this beetle.

A CERAMBYCID (Prionus sp.)

Alabama. J. M. Robinson (September 26): Mature cotton stalks attacked at Fayette, Fayette County. Stalks dying after attack by the larvae at the base. Several fields of cotton in this area affected.

COTTON LEAF WORM (Alabama argillacea Hbn.)

New Hampshire. H. T. Fernald (September 23): Quite an abundance of moths at lights in Concord, Merrimack County, on the evening of September 20.

Vermont. A. I. Bourne (September 21): Large numbers of moths attracted to blue neon lights and white street lights at Brattleboro, southern Vermont. Few, if any, moths found flying toward or alighting near red lights. Light poles covered with moths during the day.

Massachusetts. A. I. Bourne (September 21): Swarms of moths first noted about lights on September 14. in Greenfield and vicinity, Franklin County. Very abundant since then.

New York. R. W. Leiby (September 22): Many parts of the State invaded by moths. Numerous reports received indicating that windows, poles, and parts of houses near strong lights are covered with them at night. Moths apparently reached the State during the night of September 17. Two reports received of mild injury by the moths to ripening grapes and peaches.

Pennsylvania. C. L. Griswold (September 21): Numerous moths noted on the night of September 20. Especially numerous in Stroudsburg, Monroe County.

Ohio. T. H. Parks (September 23): Moths abundant around lights and resting on warm surfaces during the day. Ripening peaches injured at Waterville, near Toledo, both on the tree and in baskets in the packing house. Common around street lights during most of September.

Indiana. J. J. Davis (September 27): Moths appeared in large numbers in many sections of the State, the first report coming on September 12 from Martinsville, Morgan County, where they were attacking everbearing strawberries, causing the fruits to soften and rot. Last report from Huntington, Huntington County, on September 17, where they occurred in enormous numbers at lights.

Michigan. R. Hutson (September 27): Adults appeared at East Lansing, Ingham County, around lights on about September 3. Appearance and reports of abundance sent in from various parts of the State. No damage reported.

Tennessee. G. M. Bentley (September 14): Present in spots in the cotton-growing counties of western Tennessee, but injury checked by control measures. Heaviest infestations found in Gibson and Weakley Counties, where little dusting was carried on.

South Carolina. J. G. Watts (September 12): Moths of the first generation emerging at Blackville, Barnwell County.

F. F. Bondy and C. F. Rainwater (September 3): No larvae seen in Florence County.

Georgia. T. L. Bissell (September 14): Two moths found in buildings at Experiment, having evidently come to lights. None observed on cotton.

Florida. L. C. Fife and C. S. Rude (September 10): Observed in many fields in small numbers in Lake, Alachua, Marion, and Gilchrist Counties during the week. Not defoliating the plants in any fields. (September 24): A few in most fields, except in Lake County.

Alabama. J. M. Robinson (August 31): Active in Fayette, Morgan, Madison, and Calhoun Counties, all in northern Alabama. No report of activity from southern Alabama.

Mississippi. C. Lyle (September 23): A great part of the cotton in Mississippi more or less defoliated during the last month. Some defoliation reported to have occurred in practically every county.

R. L. McGarr, et al. (September 10): A good part of the succulent cotton either stripped or badly ragged in Oktibbeha and Lowndes Counties during the last few days. A large number of the larvae have entered the pupal stage. (September 17): Most of the succulent cotton in this section either defoliated or badly ragged.

E. W. Dunnam, et al. (September 10): Much cotton in Washington County being ragged. Many fields completely defoliated. (September 17): Cotton not being completely stripped, thus leaving plenty of food for boll weevils unless stripping is more complete than at present. (September 24): Many fields now completely defoliated, but very little ground movement of worms has occurred.

Louisiana. C. O. Eddy (September): Cotton defoliated in large areas of Louisiana.

M. T. Young and assistants (September 10): Infestation general in Madison Parish. Very little stripping so far but larvae ranging from small to half-grown very numerous in practically all fields. (September 17): Practically all cotton in this parish defoliated during the last week. (September 24): Worms still found in parts of fields that were not completely defoliated. No decrease in yield except probably in a few fields of young cotton, owing to lateness of outbreak.

Missouri. L. Haseman (September 21): A moderate flight of moths noted during September from the south through central Missouri. Moths still present.

Arkansas. D. Isely (September 22): No extensive damage in any part of the State, although control measures were necessitated in some localities.

Oklahoma. C. F. Stiles (September 22): Much of the cotton over the State now defoliated.

F. A. Fenton (September 20): Most of the cotton in the vicinity of Stillwater defoliated.

Texas. R. K. Fletcher (September 22): Hundreds of acres of cotton in Ellis County observed on September 3 to have been stripped of leaves.

K. P. Ewing, et al. (September 10): Cotton leaf worms can still be found in most of the old and the young cotton in Calhoun County. Late-planted cotton dusted for control on several farms this week.

R. W. Moreland, et al. (September 3): Some spot dusting done during the week in Brazos and Burleson Counties. (September 10): No damage done in plots in Brazos and Burleson Counties. Spot dusting being continued in young cotton. (September 17): No ragging noticed at any point in Brazos and Burleson Counties during the week. Scattering larvae found in most fields of late-planted cotton, but, so far as known, no dusting has been done. (September 24): No damage during the week. Moths fairly abundant and a few eggs noticed.

A. J. Chapman (September 10): Leaf worms have practically stopped working in the Fresidio area, allowing the plants to put on new foliage.

Arizona. W. A. Stevenson (September 17): Some dusting in the Marana section, Pima County, but infestation not very heavy. (September 24): Heaviest infestation found near Tubac, Santa Cruz County, on September 22. Larvae in spots had ragged the top leaves, but most of them were beginning to pupate.

BOLLWORM (Heliothis obsoleta F.)

South Carolina. F. F. Bondy and C. F. Rainwater (September 3): Some bollworms observed damaging bolls in Florence County. (September 17): Some bollworms present and doing some damage in Florence County.

Georgia. T. L. Bissell (September 8): Observed at Experiment and Zebulon, central Georgia, entering cotton bolls and a few attacking pepper fruits.

P. M. Gilmer and P. A. Glick (September 4): Scarce in Lowndes, Echols, Cook, Tift, and Berrien Counties.

Florida. L. C. Fife and C. S. Rude (September 3): Present in all fields in Lake, Alachua, Marion, and Gilchrist Counties to some extent but not serious. (September 17): Present in nearly all fields and in some places considerable damage has been done to the crop. (September 24): Present in small numbers in nearly all fields in the above-mentioned counties, with the exception of Lake.

Mississippi. E. W. Dunnam, et al. (September 3): Few larvae found in Washington County. (September 10): Several thousand acres in southwestern Bolivar County reported as being infested 100 percent.

Arkansas. D. Isely (September 22): Local injury to cotton bolls appeared scattered over the State during late August and early September. Damage considerably more than average, although not so severe as in 1936. This species has also caused some local damage to heads of grain sorghum.

Texas. K. P. Ewing, et al. (September 10): Bollworm just about gone in Calhoun County. Very little damage noticed at present, even in late-planted cotton.

R. W. Moreland, et al.: (September 3): Very few eggs or small larvae in plots in Brazos and Burleson Counties at present. (September 17): A few bollworms found in late-planted cotton on September 16 but injury was light. (September 24): In examining 400 tops, an average of 7 eggs were found per 100 terminals. A number of moths noticed in the fields.

A. J. Chapman (September 3): Average bolls per plant in the Presidio area about the same in 1937 and 1938, indicating that bollworms have done very little damage.

Arizona. W. A. Stevenson (September 3): Another brood of bollworms appeared during the week, but in small numbers. Apparent now that they will not occur in damaging numbers.

PINK BOLLWORM (Pectinophora gossypiella Saund.)

Texas. R. E. McDonald (August 26): Specimens found in Cameron, Hidalgo, and Willacy Counties. Number of specimens taken indicates a slight increase in infestation in Cameron County. One specimen found in Kleberg County, the first ever found in that county. A few specimens found at the San Antonio laboratory in gin trash from Ward County.

A. J. Chapman (September 3): Average infestation in 12 fields in Presidio County during the week was 82.33 percent, with an average of 4.53 larvae per infested boll. Average infestation in 1937 was 68.14 percent, with 5.10 larvae per infested boll. (September 10): In 16 fields in the Presidio area the average infestation was 95.62 percent, compared to 98.27 in 1937, and the average number of larvae per infested boll was 5.87, as compared with 8.75 in 1937, showing a significant reduction in the average number of larvae per infested boll. (September 17): Average infestation in 24 fields during the week was 96.33 percent, with an average of 6.40 larvae per infested boll. (September 24): Infestation counts made in 12 fields, that had not yet been flooded, during the early part of the week. All fields 100-percent infested, averaging 7.65 larvae per infested boll. A comparison between 8 identical fields in 1938 and 1937 shows the only significant difference to be the reduction in the average number of larvae per infested boll, 7.43 in 1938, compared to 12.23 in 1937. Infestation in 1938 was 100 percent, as in 1937.

Correction: The reports by A. J. Chapman for August 20 and 27 on page 486 of the September issue of the Insect Pest Survey Bulletin should have been included under P. gossypiella instead of Anthonomus grandis Boh.

COTTON SQUARE BORER (Strymon melinus Hbn.)

Texas and New Mexico. R. E. McDonald (August 2): Reported as doing considerable damage in the El Paso, Tex., and Mesilla, N. Mex., Valleys.

COTTON FLEA HOPPER (Psallus seriatus Reut.)

Louisiana. B. A. Osterberger and M. W. Mecon (September): Very numerous in all stages on croton weed in central Louisiana on September 23.

Oklahoma. E. E. Ivy (September 21): Large population being built up on croton in the upland and river-bottom areas in the vicinity of Idabel, McCurtain County.

Texas. R. W. Moreland and A. B. Beavers (September 24): Hoppers present in all fields of young cotton visited in Brazos and Burleson Counties.

PLANT BUGS (Miridae)

Texas. K. P. Ewing, et al. (September 10): Several fields of late-planted cotton in Calhoun County inspected during the week and many Adelphocoris rapidus Say and Creontiades debilis Van D. found present in the cotton. Practically all of the squares, both small and large, not already injured by boll weevil, were being injured and shed by these insects. Nearly all the small and many of the half-grown bolls also injured by these bugs, which are believed to be causing more damage just now to late-planted cotton than any other insect in the field. From two to three of these mirids could be found in many of the large squares.

SOUTHERN GREEN STINKBUG (Nezara viridula L.)

Texas. R. K. Fletcher (September 22): Abundant on young cotton in several fields in Dallas County on September 3.

COTTON STAINER (Dysdercus suturellus H. S.)

Florida. L. C. Fife and C. S. Rude (September 3): In many fields in Lake, Alachua, Marion, and Gilchrist Counties. It first made its appearance on the southern edge of the cotton-growing region and has spread rapidly to the north. (September 10): Increasing rapidly. (September 17): Doing considerable damage in some sections. Control measures being used. (September 24): In the above-mentioned counties, except Lake County, many reports continue to come in, but often there are only a few in the fields from which they are reported. Numerous and injurious in some places. Apparently a much heavier infestation in other sections of the State. Control measures still being applied.

WHITEFLIES (Aleyrodidae)

Mississippi. E. W. Dunnam and J. C. Clark (September 3): Whiteflies are gradually building up in rank cotton in Washington County. Existing infestation exceeds any that has ever come to our attention. Apparently, conditions conducive to aphid reproduction also favor whitefly reproduction.

E. W. Dunnam (August 12): Whiteflies (Trialeurodes abutilonea Hald.) collected on cotton leaves at Stoneville, Washington County. (Det. by P. W. Mason.)

FOREST AND SHADE-TREE INSECTS

MOTHS (Lepidoptera)

Connecticut. J. V. Schaffner, Jr. (September 22): Late in August and early in September the foliage in mixed hardwood stands in Middlesex County showed varying degrees of defoliation. Larvae of some 50 species of Lepidoptera were found more or less common in this area. The species most common and undoubtedly responsible for the greater part of defoliation, include Anisota senatoria S. & A., Symmerista albifrons S. & A., Hetorocampa manteo Dbdly., Halisdota tessclaris S. & A., Halisdota caryae Harr., Datana contracta Walk., Datana ministra Drury, and Telea polyphemus Cram.

FALL WEBWORM (Hyphantria cunea Drury)

Connecticut. M. P. Zappe (September 20): Very abundant in Fairfield County, southern Connecticut, on a variety of plants. Rest of State not so heavily infested.

Virginia. H. G. Walker (August 29): Larvae are very abundant this fall, doing considerable damage in southeastern Virginia. (Det. by C. Heinrich.)

North Carolina. Z. P. Metcalf (September 30): More abundant throughout the State on persimmon, pecan, and sourwood, than observed during the last 30 years.

Florida. J. R. Watson (September 24): More abundant than usual during August and the first part of September, especially on pecans and persimmon.

A. H. Madden (September 20): Moderately abundant on pecan trees in Gadsden County during the last few weeks.

Mississippi. C. Lyle (September 23): Found attacking pecan trees throughout the Aberdeen district, Monroe County, although doing no serious damage. Scarce in the Poplarville area, Pearl River County.

Tennessee. G. M. Bentley (September 9): Found in large quantities on various trees in the western counties. Very few nests occur in central and eastern Tennessee. Usually Hyphantria occurs in large numbers in the central counties, but this year there are surprisingly few.

Indiana. J. J. Davis (September 27): Normally abundant in all parts of the State.

Wisconsin. C. L. Fluke (September 21): Very plentiful in the eastern and southern parts of the State.

A CATERPILLAR (Heterocampa manteo Dbldy.)

Connecticut. R. B. Friend (September 22): Unusually abundant on oak and American beech at Killingworth, Middlesex County, and Litchfield, Litchfield County.

Virginia. C. R. Willey (September 6): Occurred in large numbers and totally defoliated seven 25-foot linden trees at Greenwood, Albemarle County. (Det. by C. Heinrich.)

Minnesota. A. G. Ruggles and C. E. Mickel (September 13): Reported as defoliating basswood in the northern and central parts of the State.

FOREST TENT CATERPILLAR (Malacosoma disstria Hbn.)

Minnesota. A. G. Ruggles and assistants (August 23): Very abundant on black walnut in Ramsey County.

TENT CATERPILLAR (Malacosoma sp.)

Utah. G. F. Knowlton and F. C. Harmston (September 10): Seriously damaged the foliage of apple and cottonwood trees. Annoyance reported from their crawling through openings around screens and doors and becoming household pests.

TWIG PRUNER (Hypermallus villosus F.)

Missouri. L. Haseman (September 21): Unusually abundant on fruit trees, as well as on forest and shade trees, at Columbia. Fruit growers throughout the State are complaining about it this fall.

WALKINGSTICK (Diapheromera femorata Say)

Pennsylvania. F. W. Graham (September 12): Many of the woodland trees on State Highway 45, 2 miles east of Woodward, Centre County, entirely defoliated. Average defoliation, 55 to 60 percent.

A. F. Burgess (August 25): A severe infestation reported in the eastern part of Carbon County. It is estimated that defoliation averages from 10 to 15 percent in an area of approximately 200 acres, and some individual trees are from 75 to 85 percent defoliated. In this area the woodland growth consists of white, red, scarlet, chestnut, and scrub oaks, and sassafras, aspen, red maple, chestnut sprouts, and pine. Except for the pine and sassafras, noticeable feeding has taken place on all of this growth. Insects have not reached maturity and it is estimated that feeding will continue for a period of 3 or 4 weeks. A smaller outbreak of this insect reported in Polk Township, Monroe County.

AN APHID (Longistigma caryae Harr.)

New York. E. P. Felt (September 23): Found in some numbers near Westbury, western Long Island.

New Jersey. M. D. Leonard (September 24): Sycamores on streets at Haddonfield, Camden County, beginning to develop small colonies on underside of branches. A few alates can be found and these are in flight to some extent.

ASH

A BEETLE (Xyloryctes satyrus F.)

Iowa. C. J. Drake (September 15): Reported as defoliating a growth of ash trees near Salix, western Iowa. Another report from western Iowa states that the insects were seriously damaging the roots of ash trees.

BIRCH

BRONZED BIRCH BORER (Agrilus anxius Gory)

Ohio. E. W. Mendenhall (September 17): Birch trees in Delaware found infested. Some are dying and other birch trees are already dead.

CATALPA

CATALPA SPHINX (Ceratomia catalpae Edv.)

Indiana. J. J. Davis (September 27): Responsible for defoliation of catalpas throughout the State.

CYPRESS

COTTONY CYPRESS SCALE (Ehrhornia cupressi Ehrh.)

California. Kern County Monthly News Letter (September 6): Damage to shade trees being reported frequently in Kern County. On the increase on Monterey cypress trees and hedges and in some instances the trees are injured to the extent that it is advisable to destroy them.

ELM

ELM LEAF BEETLE (Galerucella xanthomelaena Schr.)

Utah. G. F. Knowlton (September 8): Seventeen elm trees at Smithfield, Cache County, severely damaged. Some of the trees have the foliage largely brown and have thrown out a weak growth of leaves at the ends of the twigs.

California. Kern County News Letter (September 6): Many unsprayed elm trees in Kern County completely defoliated as a result of attacks of elm leaf beetle. Some elms are putting out new leaves.

LARCH

LARCH SAWFLY (Lygaeonematus erichsonii Htg.)

Wisconsin. H. J. MacAloney (September 14): A larch swamp north of Slinger, Washington County, showed noticeable defoliation the last week in August.

LOCUST

LOCUST BORER (Cyllene robiniae Forst.)

Illinois. W. P. Flint (September 23): Adults have been noted in slightly more than usual numbers on goldenrod in the vicinity of locust plantations.

MAPLE

GREEN-STRIPED MAPLE WORM (Anisota rubicunda F.)

Michigan and Minnesota. H. J. McAloney (September 14): Roadside trees completely defoliated early in August in northern Michigan and Minnesota.

UNICORN CATERPILLAR (Schizura unicornis S. & A.)

Indiana. J. J. Davis (September 27): Sent in from New Albany, Floyd County, on September 12. Reported as feeding on maple foliage.

NORWAY MAPLE APHID (Periphyllus lyropictus Kess.)

New Jersey. M. D. Leonard (September 24): Many street maple trees in Haddonfield recently show increasing infestation, with some evidences of honeydew spotting cars parked in some streets. Infestation fairly light to date and alates very scarce. This aphid present in only very small numbers for the last month or so.

Maryland. E. N. Cory (August 15): Present on Norway maple at Pikesville, Baltimore County.

OAK

ORANGE-STRIPED OAK WORM (Anisota senatoria S. & A.)

Connecticut. R. B. Friend (September 22): Abundant on oak throughout the State..

E. P. Felt (September 23): Reported as somewhat abundant on oak at Old Lyme.

Virginia. C. R. Willey and F. R. Freund (September 22): Much more abundant this year than for many years in Richmond and vicinity. Many ornamental oaks defoliated and many thousands of trees in the cutover areas where the second growth is from 6 to 15 feet tall.

A TUSSOCK MOTH (Olene achatina S. & A.)

Connecticut. E. P. Felt (September 23): Larvae were generally abundant on white, red, and black oaks at Stamford and Danbury, skeletonizing the underside of the leaves on the lower exposed branches, particularly along roadsides. This is the first year in a decade in which the larvae have attracted notice.

A GALL INSECT (Neuroterus saltatorius Edwards)

California. G. H. Kaloostian (August 23): Specimens of galls on the leaves of valley oak were brought in from Parlier, Fresno County. Galls collected by the thousands and could be heard at night. Dissection revealed immature and mature larvae and a pupa.

GOLDEN OAK SCALE (Asterolecanium variolosum Ratz.)

Massachusetts. E. P. Felt (September 23): Sufficiently abundant to rather seriously injure English oaks at Weston, Middlesex County.

TWO-LINED CHESTNUT BORER (Agrilus bilineatus Web.)

Delaware. E. P. Felt (September 23): Was reported as somewhat injurious on large oaks near Wilmington.

PINE

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

Connecticut. E. P. Felt (September 23): Present in moderate numbers on Austrian pine at Greenwich.

NANTUCKET PINE SHOOT MOTH (Rhyacionia frustrana Comst.)

Delaware. E. P. Felt (September 23): Found in somewhat injurious numbers on pine near Wilmington.

Tennessee. G. M. Bentley (September 26): Found doing damage to evergreens at Columbia, Maury County. (Det. by C. Heinrich.)

A SAWFLY (Diprion frutetorum F.)

New Jersey. C. W. Collins (September 20): On July 11, 1938, C. L. Griswold made a collection of sawfly cocoons from litter under red pine at Lamington, Somerset County. Miss G. A. Sandhouse determined the adult as D. frutetorum and remarked that this was the first identification of this European species from the United States, although two specimens in the National Museum collection apparently belong to the same species. One specimen is from Ithaca, N. Y., and the other from Rye, N. Y. D. frutetorum was found infesting Scotch pine near Niagara Falls, Ontario, in 1934, and in the autumn of 1937 its known distribution in the Niagara Peninsula extended from Niagara Falls, Ontario, to Fort Erie, Ontario.

SAWFLIES (Neodiprion spp.)

Mississippi. C. Lyle (September 23): Larvae of N. lecontei Fitch sent in on September 12 with the report that about 40 acres of pine timber at Escatawpa, Jackson County, were being defoliated. Damage to pine by this species reported from Summit, Pike County, on September 1, while specimens were sent in from Brookhaven, Lincoln County, with a report that a Cedrus deodara tree, 30 feet tall, is being defoliated.

Ohio. T. H. Parks (September 23): Specimens of Abbott's sawfly (N. abbotii Leach) received from four widely separated localities, with the statement that they were defoliating new pine plantings.

Michigan. R. Hutson (September 27): Abbott's sawfly has been reported from Richland, Grand Rapids, and Jackson.

Iowa. C. J. Drake (September 15): N. abbottii reported as defoliating trees at Coon Rapids, Carroll County, and Davenport, Scott County.

Minnesota. A. G. Ruggles and C. E. Mickel (September 13): Neodiprion sp. near lecontei reported as defoliating jack pine in the southeastern part of Minnesota.

SOUTHERN PINE SAWYER (Monochamus titillator F.)

Mississippi. C. Lyle (September 23): Specimens taken from pine trees at Gulfport sent in on August 29, with the statement that a number of trees were dying.

WHITE-PINE WEEVIL (Pissodes strobi Peck)

Pennsylvania. E. J. Udine (September 3): Adult weevils emerging from dead leaders of white pine at Laporte, Sullivan County. Elevation 2,047 feet.

Michigan. R. Hutson (September 27): Sent in from Remus, Mecosta County, where it was reported as infesting several acres of pine and spruce.

PINE BARK APHID (Pineus strobi Htg.)

Ohio. E. W. Mendenhall (September 7): Found moderately abundant on white pine at Gahanna, Franklin County.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

New York. R. E. Horsey (September 23): A group of five large red pines, 30 to 40 feet in height, in an ornamental planting at Rochester, were badly infested, almost every needle having several scales on it.

Ohio. E. W. Mendenhall (September 15): Quite serious on the pines in a nursery in Newark, Licking County. Often infests mugho pine.

Alabama. J. M. Robinson (August 31): Reported on pine at Tarrant, Jefferson County, on August 27.

Tennessee. G. M. Bentley (August 29): Found on spruce trees at Elizabethton, Carter County. (Det. by H. Morrison.)

Nebraska. M. H. Swenk (September 20): Black Hills spruce infested in Buffalo County on September 12.

Utah. G. F. Knowlton (September 14): Austrian pine foliage damaged this season on the campus at Logan.

SCOTCH PINE LECANIUM (Toumeyella numismaticum P. & McD.)

Ohio. E. W. Mendenhall (September 9): Quite abundant and doing some damage to Chinese pine trees in a nursery.

POPLAR

A LEAF BEETLE (Chrysomela tremulae F.)

Minnesota. H. J. MacAloney (September 14): Complete defoliation of young aspen trees in small groups on the Kawishiwi Ranger District, Superior National Forest. Larvae were full grown on August 17.

AN APHID (Periphyllus populincola Thos.)

Utah. G. F. Knowlton (September 14): Poplar twigs frequently heavily infested by this aphid.

SPRUCE

SPRUCE BUDWORM (Cacoecia fumiferana Clem.)

Minnesota. A. G. Ruggles and C. E. Mickel (September 13): Reported as very abundant.

SPRUCE NEEDLE MINER (Recurvaria piceaella Kearf.)

Wisconsin. H. J. MacAloney (September 14): Somewhat common on black spruce on the Chequamegon National Forest, Mineral Lake Ranger District, but the attack is usually light and little damage is evident. Larvae found on August 23.

EASTERN SPRUCE BEETLE (Dendroctonus piceaperda Hopk.)

New Hampshire and Vermont. T. J. Parr (September 23): Infestations in the northern division of the Green Mountain National Forest, Vt., are decreasing. The number of infested trees on survey strips was considerably less than in 1936 or 1937. Very light infestations in the mature spruce stands in the Waterville Valley section of the White Mountain National Forest, N. H.

SYCAMORE

SYCAMORE LEAF ROLLER (Ancylis platanana Clem.)

Connecticut. M. P. Zappe (September 20): Larvae very abundant on sycamore trees throughout the State. On some trees nearly 50 percent of the leaves have been rolled and eaten.

A TUSSOCK MOTH (Halisidota sp.)

New Jersey, Delaware, and Virginia. H. W. Allen (September 16): Widespread and severe defoliation of sycamores noted in Accomac and Northampton Counties, Va., and, considerable feeding on the same trees in Delaware and southern New Jersey, caused by two species of caterpillars. The one chiefly responsible for the damage is Halisidota sp., presumably harrisii Walsh. (Det. by C. Heinrich.)

TULIPTREE

A LEAF MINER (Phylloconistis liriodendrella Clem.)

New Hampshire. E. P. Felt (September 23): Found in small numbers on tulip-trees at Center Harbor, Belknap County.

WALNUT

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Ohio. T. H. Parks (September 23): Serious defoliation to walnut.

Iowa. C. J. Drake (September 15): Reported as defoliating walnut trees in every county of the State.

WILLOW

POPLAR AND WILLOW BORER (Cryptorhynchus lapathi L.)

Oregon. D. C. Mote (September): Adults emerged in August in the Willamette-Columbia River bottom in normal abundance. Damage severe on flood-land willow.

AN AFHID (Melanoxanthemum smithiae Monell)

Indiana. J. J. Davis (September 27): Damaging willow in many places throughout the State.

A GALL INSECT (Rhabdophaga strobilooides Walsh)

Nebraska. M. H. Swenk (September 20): Found on willow in Antelope County on September 5.

I N S E C T S A F F E C T I N G G R E E N H O U S E
A N D O R N A M E N T A L P L A N T S
A N A P H I D (P r o c i p h i l u s e r i g e r o n e n s i s Thomas)

Michigan. R. Hutson (September 27): The aster root aphid has been brought in from Detroit and is reported as injuring several kinds of garden plants.

GARDEN FLEA HOPPER (H a l t i c u s c i t r i Ashm.)

New Jersey. M. D. Leonard (September 23): Fairly common at Haddonfield. Leaves of ageratum considerably stippled with the feeding punctures on all the plants in a large ornamental border. The short-winged form greatly predominated. Damage is light.

Virginia. C. R. Willey and F. R. Freund (September 22): Numerous in flower gardens in Richmond this season, especially on verbenas. A large garden patch of pole butterbeans observed to have been ruined by this pest in Loudoun County, near Round Hill, on July 12.

COTTONY-CUSHION SCALE (I c e r y a p u r c h a s i Mask.)

Alabama. J. M. Robinson (August 31): Reported on boxwood at Uriah, Monroe County, on August 10, and at Atmore on August 24.

Mississippi. C. Lyle (September 23): A fairly heavy infestation found at Moss Point during the last month.

WHITE PEACH SCALE (A u l a c a s p i s p e n t a g o n a Targ.)

Virginia. C. R. Willey and F. R. Freund (September 22): Apparently steadily increasing in Richmond. Calls for information and control received practically every day.

GREENHOUSE WHITEFLY (T r i a l e u r o d e s v a p o r a r i o r u m Westw.)

Georgia. T. L. Bissell (September 14): Gardenia near Griffin, Spalding County, heavily infested with whitefly. Leaves have many eggs and a heavy covering of sooty mold.

CITRUS MEALYBUG (P s e u d o c o c c u s c i t r i Risso)

Nebraska. M. H. Swenk (September 20): Found attacking geraniums and foliage plants in Cuming County on August 22.

ARBOVITAE

A MITE (P a r a t e t r a n y c h u s a l p i n u s McG.)

Washington. E. J. Newcomer (July 19): Common on T h u j a o c c i d e n t a l i s at Yakima and, according to McGregor, not previously reported from Washington. (Det. by E. A. McGregor.)

AZALEA

AZALEA SCALE (Eriococcus azaleae Comst.)

Alabama. J. M. Robinson (August 31): Reported on azaleas at Atmore on August 24.

Mississippi. C. Lyle (September 23): On azaleas received from Summit, Pike County, on September 17. Steps are being taken to eradicate this infestation.

AZALEA LACEBUG (Stephanitis pyrioides Scott)

New Jersey. M. D. Leonard (September 16): At Haddonfield several small azalea shrubs, about knee high, badly infested with this bug, almost every leaf on about half of the plants being a rusty color.

BAMBOO

BAMBOO SCALES (Asterolecanium spp.)

Florida. E. A. Back (September): Scales infesting bamboo of the small variety produced so much honeydew, and resulting blackening of leaves and nodes, that swarms of honey bees, wasps, and hornets were found during June, feeding on the honeydew. (Det. by Louise M. Russell as A. bambusae Bdv. and A. milinis Bdv.)

CHRYSANTHEMUM

CHRYSANTHEMUM LEAF MINER (Phytomyza chrysanthemi Kowarz)

Mississippi. L. J. Goodgame (September 23): Chrysanthemum leaves showing injury received on September 21 from a greenhouse in Tupelo, Lee County.

STALK BORER (Papaipema nebris nitela Guen.)

North Carolina. Z. P. Metcalf (September 30): Chrysanthemums in Wilson County and ornamentals throughout the State being attacked by the common stalk borer.

CHRYSANTHEMUM APHID (Macrosiphoniella sanborni Gill.)

New Jersey. M. D. Leonard (September 17): Winged and wingless forms present on a number of plants but not abundant at Haddonfield. Damage light.

COLUMBINE

COLUMBINE LEAF MINER (Phytomyza minuscula Gour.)

New Jersey. M. D. Leonard (September 16): A number of plants in several gardens in Ridgewood badly infested from mid-August to mid-September.

Believed to be worse than last year. Some of the plants have almost every leaf heavily mined and visibly affected.

NOTE: P. minuscula is abundant throughout North America, wherever Aquilegia grows. It has been confused in American literature with P. aquilegiae Hardy, which probably does not occur in North America. (S. W. Frost, Ann. Ent. Soc. Amer. 23, pp. 457-460 1930.)

AN APHID (Myzus eissigi G. & P.)

New Jersey. M. D. Leonard (September 16): A number of plants in a garden at Ridgewood, observed for several seasons, had almost no aphids until late in August, and early in September the infestation was still very light. This seems to be the common species in the State wherever observations have been made.

DAHLIA

A FLEA HOPPER (Halticus bracteatus Say)

Georgia. T. L. Bissell (September 2): Killing the leaves of some varieties of dahlia at Hapeville.

A FLY (Tephritis finalis Loew)

Georgia. T. L. Bissell (September 2): Flies observed ovipositing on dahlia blooms today at Hapeville. Maggots work down and feed at the base of the petals.

GLADIOLUS

GLADIOLUS THRIPS (Taeniothrips simplex Morison)

North Carolina. Z. P. Metcalf (September 30): Observed to be doing serious damage in Wilson County.

Ohio. E. W. Mendenhall (September 17): Numerous in some of the gladiolus plantations at Delaware, Delaware County.

Utah. G. F. Knowlton (September 14): Thrips have not been unusually abundant on gladiolus examined this season in northern Utah.

HIBISCUS

A PLANT BUG (Corizus sidae F.)

Arkansas. W. F. Turner (September 12): All stages very abundant on cultivated hibiscus at Little Rock. Massed on the seed pods and their petioles, and so abundant as to produce an obvious staining of the foliage. (Det. by H. G. Barber.)

JUNIPER

JUNIPER SCALE (Diaspis carueli Targ.-Tozz.)

Maryland. G. S. Langford (September 27): Present generally in the State on Irish juniper.

Virginia. C. R. Willey and F. R. Freund (September 22): Unusually abundant this season on Irish juniper in the nurseries in eastern Virginia, from Arlington to Norfolk. Apparently a rather rapid spread and build-up has occurred.

Alabama. J. M. Robinson (August 31): Reported on juniper at Tarrant on August 27.

Ohio. E. W. Mendenhall (September 20): Abundant on juniper trees in a nursery at Mount Pleasant, Jefferson County.

Michigan. R. Hutson (September 27): Very abundant at Detroit, Benton Harbor, Monroe, Grand Rapids, Grand Haven, Ann Arbor, Jackson, Constantine, Sturgis, and Howell.

JUNIPER WEBWORM (Dichomeris marginellus F.)

Michigan. R. Hutson (September 27): Infesting Irish juniper at Constantine, Benton Harbor, Monroe, Detroit, Lansing, Grand Rapids, and Kalamazoo.

Maryland. G. S. Langford (September 27): Present generally throughout the State on juniper (Juniperus communis).

LILAC

LILAC BORER (Podosesia syringae Harr.)

Nebraska. M. H. Swenk (September 20): Found infesting a lilac bush in Burt County on August 24 and reported as doing similar damage in Douglas County on August 27.

PRIVET

PRIVET THRIPS (Dendrothrips ornatus Jabl.)

Indiana. J. J. Davis (September 27): First observed in Indiana last year. Generally abundant throughout the State this year and causing severe silverying of the foliage of privet. (Det. by J. D. Hood.)

RHODODENDRON

RHODODENDRON LACEBUG (Stephanitis rhododendri Horv.)

New Jersey. M. D. Leonard (September 16): Scarce to absent on many plants at Ridgewood during August although there are evidences of considerable infestation on older leaves earlier in the summer.

ROSE

TARNISHED PLANT BUG (Lygus pratensis L.)

Indiana. J. J. Davis (September 27): Sent in from Greensburg, Decatur County, on September 14. Blasting rosebuds and causing the buds to grow in a deformed manner.

ROSE APHID (Macrosiphum rosae L.)

New Jersey. M. D. Leonard (September 23): Small colonies are present on the tender terminal shoots only of a number of climbing roses in a garden at Haddonfield. Alates scarce. Damage is negligible.

VERBENA

A WEEVIL (Artipus texanus Pierce)

Mississippi. G. L. Bond (September 23): Present in moderate numbers on verbena at Lucedale on August 22.

VIRGINIA CREEPER

GRAPE LEAFHOPPER (Erythroneura comes Say)

Nebraska. M. H. Swenk (September 20): Proving troublesome on woodbine in Perkins County on August 25.

Utah. G. F. Knowlton (September 7): Virginia creepers have from 25 to 90 percent dry, brown leaves on many ornamental vines observed in northern Utah counties owing to attack by this insect. (September 14): Damage to Virginia creepers more serious and widespread each week.

I N S E C T S A T T A C K I N G M A N A N D
D O M E S T I C A N I M A L S

MAN

MOSQUITOES (Culicinae)

Georgia. J. B. Hull (August 31): The smallest number of salt marsh mosquitoes (Aedes sollicitans Walk.) within the last 4 years has been reported by residents of the coastal islands and the coastal section of the State. The scarcity of mosquitoes appears to be due to the decreased rainfall in these areas and to the mosquito-control work.

Tennessee. G. M. Bentley (September 26): Aedes aegypti L. was common in offices and homes during the late summer and early fall months.

Missouri. L. Haseman (September 21): During the month some species of mosquitoes have continued to be annoying and since the middle of the

month have been breeding abundantly in rain barrels at Columbia. However, there seems to be a scarcity of Anopheles spp. in this area. It is observed that Missouri has again been having a rather heavy epidemic of sleeping sickness of horses, particularly in the northern half of the State.

EYE GNATS (Hippelates spp.)

Texas. H. M. Brundrett (August 30): Eye gnats, tentatively determined as H. dorsatus Loew, were numerous enough August 17 to be quite annoying on the Wakefield ranch, 5 miles south of Uvalde. About 20 gnats per person were noted.

AMERICAN DOG TICK (Dermacentor variabilis Say)

Maryland. E. N. Cory (September 7): Nymphs were found on dogs and in animals' bedding at Annapolis and Baltimore.

BLACK WIDOW SPIDER (Latrodectus mactans F.)

New Jersey. H. C. Donohoe (September 10): Noted in considerable numbers during the summer in the vicinity of Trenton. At White Horse they have been abundant in the office buildings, storages, cellars, and out-of-doors about the buildings. Recently, in rearranging a 9 x 10-foot storage space, seven immature females were killed and many more were observed.

Delaware. H. C. Donohoe (September 10): Noted in considerable numbers during the summer at Dover and Edge Moor.

Maryland. H. C. Donohoe (September 10): Noted in considerable numbers during the summer at Salisbury and Eden.

North Carolina. J. F. Cooper (September 23): Two reports received in Salisbury during the summer. Six adult females encountered in Spencer since September 1.

Washington. E. J. Newcomer (September): This spider appears to be more numerous at Yakima than usual, having been reported from orchards, basements, garages, etc. Several people have reported killing from 15 to 20 of the spiders on their premises.

CATTLE

SCREWWORM (Cochliomyia americana C. & P.)

Illinois. W. P. Flint (September 23): There is a considerable outbreak of the screwworm in an area in the north-central part of the State, and damage has been reported in separate areas in the west-central part.

Georgia. T. L. Bissell (September 3): A case reported in the nose of a

steer on September 1, from Milner, central Georgia.

A. L. Brody (September 19): This insect has increased markedly in southern Georgia during the last month. Numerous cases reported in the vicinity of Valdosta. Natural infestations observed in dogs, cattle, sheep, and pigs. Incidence on artificially wounded animals at the Experimental Farm exceedingly high. Since August 20 there have been 202 infestations recorded, the greatest number occurring from September 10 to 19.

Florida. J. B. Hull (August 31): Reported causing considerable loss on one large farm near Fort Pierce, and complaints received from other livestock owners in that vicinity.

A. H. Madden (September 20): Stock raisers in Gadsden County report that a considerable number of cases have occurred during the last 2 or 3 weeks.

Tennessee. G. M. Bentley (September 26): The screwworm survey continuing throughout the spring and summer has revealed infestations in Shelby, Fayette, and Tipton Counties. These were rather light. All infestations were traced back to cattle shipped into the State from infested areas.

Texas. H. M. Brundrett (August 31): Screwworms not numerous in the vicinity of Uvalde during the first half of August but with the advent of summer shearing the number of cases has increased markedly. Scattered cases were present through the month, with a few reported instances of numerous cases in sheep and goats. These were largely infestations in the mouths of the animals owing to their feeding on pricklypear.

HORNFLY (*Haematobia irritans* L.)

North Carolina. G. B. Merrill (August): Horn fly moderately abundant in the Valle Crucis area, Watauga County, in August. Elevation around 3,000 feet.

Florida. A. L. Brody (September 19): Averaged at least 1,000 per animal on a farm 5 miles northeast of Monticello, Jefferson County.

Missouri. L. Haseman (September 21): During the month horn flies have continued to be quite abundant and annoying to livestock throughout central Missouri.

Texas. H. M. Brundrett (August 30): In the northern part of Kinney County, 15 miles north of Brackettville, 25 head of cattle were examined and found to be practically free of horn flies. One steer had about 25.

STABLEFLY (*Stomoxys calcitrans* L.)

Georgia. J. B. Hull (September 15): Recently unusually abundant on the coast. Believed to be more numerous than at any time since 1935, and residents state that they have not been so bad in the last 10 years. Their bites have caused several cases of screwworms on hogs and dogs.

Only cases observed have been around the ears, where the animals in rubbing or scratching have broken the skin.

Missouri. L. Haseman (September 21): During the month stableflies have continued to be especially abundant and annoying to livestock throughout central Missouri.

LONE STAR TICK (Amblyomma americanum L.)

Florida. A. L. Brody (September 19): One specimen collected on September 6 from cattle at Brooksville, Hernando County.

FLESH FLIES (Sarcophaga sp.)

Georgia. A. L. Brody (September 19): Nine infestations of blowfly have occurred on experimentally wounded animals during the last month at Valdosta.

HORSES

HORSE BOTFLY (Gastrophilus intestinalis Deg.)

Missouri. L. Haesman (September 21): In north-central Missouri the common botfly was apparently more active than usual during the early part of September, seemingly much later than we normally expect heavy oviposition. Reports from some autopsies indicated that this year the bots remained in the stomachs of horses much later than normal, which may account for the abundance of this fly in September.

HORSEFLIES (Tabanidae)

Texas. H. M. Brundrett (August 11): Twenty-five cows examined at Concan, Uvalde County, showed about 50 horseflies each. (August 16): Forty tabanids collected from two cows near Uvalde in 30 minutes, and not all were captured. Tabanids have been unusually abundant during August. (August 18): Hundreds of fresh egg masses of horseflies noted on rocks above the water on the Nueces River. Over 200 masses were counted on each of 2 rocks, neither rock being over 12 inches square. Near the end of August the tabanid population diminished rapidly, having been most abundant after August 1.

O. G. Babcock (September 15): Tabanids present, well distributed, but not numerous over the Edwards plateau, northwest of Sonora.

Utah. G. F. Knowlton (September 13): Horseflies are annoying livestock at West Weber, Tabanus sonomensis O. S. being the most abundant species.

California. G. H. Kalostian (August 25): A rancher in the Fowler district, Fresno County, reported killing 30 horseflies (T. punctifer O. S.) in 1 day on 1 mule. He also stated that these flies came in groups of 4 or 5 and that about as many as he killed got away. The high-water table resulting in permanent ponds is probably the main factor in the increase of horseflies in this locality. Ponds around Fowler have had water in them throughout the year for the last 2 years.

BUFFALO GNATS (Simulium sp.)

Texas. H. M. Brundrett (July 11): Thousands of larvae of all sizes and pupae, found breeding in falls at Tom Nunn Crossing, on the Nueces River. (July 28): Following a 6-foot rise of the Nueces, no larvae or pupae found at the falls. (August 13): Larvae, none more than one-fourth full size, again present on the rocks of the falls by thousands. No pupae present.

POULTRY

STICKTIGHT FLEA (Echidnophaga gallinacea Westw.)

Oklahoma. F. A. Fenton (September 20): Reported on chickens at Snow, Pushmataha County.

FOWL TICK (Argas miniatus Koch)

Oklahoma. F. A. Fenton (September 20): Reported on chickens at Weatherford, Custer County.

SHEEP AND GOAT

SHEEP BOTFLY (Oestrus ovis L.)

Georgia. A. L. Brody (September 19): Eight out of 11 goat heads dissected at Valdosta during the last month contained larvae of the nose bot. All stages from first- to third-instar larvae collected.

Texas. O. G. Babcock (August 21): Flies on the increase for the last 2 weeks. Considerable activity noticed at Sonora.

RABBITS

RABBIT TICK (Haemaphysalis leporis-valustris Pack.)

Texas. H. M. Brundrett (August 30): During August all stages of rabbit ticks were found to be abundant on jack rabbits and cottontails taken in the vicinity of Uvalde.

H O U S E H O L D A N D S T O R E D - P R O D U C T S I N S E C T S

ANTS (Formicidae)

Maryland. E. N. Cory (September 23): Generally present in the State in houses and on lawns.

Florida. E. A. Back (September): Ants collected in June at St. Leo have been identified as Camponotus abdominalis subsp. floridanus Buckley. (nesting in clay soil and extending nest into hollow of dead giant bamboo, perforating nodes to permit use of adjoining hollow spaces). Second colony in decaying camphor stump. Abundant about buildings and grounds feeding on dead insects and sweets were Dorymyrmex.

pyrnicus var. flavus McCook. Pogononyx bodius Latr. is a serious pest of lawns, destroying grass and vegetation about nests. (Det. by M. R. Smith.)

Mississippi. C. Lyle (September 23): Many complaints received regarding Solenopsis xyloni McCook and other native ants during the last month, indicating that ants are more troublesome than usual.

Texas. E. A. Back (September): On June 7, Camponotus caryae subsp. discolor Buckley, reported from Houston as found around water and usually colonizing in walls of house. (Det. by M. R. Smith.)

FIELD CRICKET (Gryllus assimilis F.)

New Jersey and Florida. E. A. Back (September): Reported as entering a bungalow on the shore at Belleville, N. J., and eating curtains and bedding. Reported as having been captured flying in numbers to lights of stores at Daytona Beach, Fla., in June. (Det. by A. B. Gurney.)

Nebraska. M. H. Swenk (September 20): Reported as the cause of annoyance in basements in Colfax and Furnas Counties late in August and early in September.

California. E. O. Essig (September 10): Common field cricket unusually abundant in the San Francisco Bay region, but also common in the San Joaquin and Sacramento Valleys. Yuba City area crickets parasitized by Mermis sp.

HOUSE CRICKET (Gryllus domesticus L.)

New York, Pennsylvania, and Ohio. E. A. Back (September): The New York Times of August 3 gives an account of "The Cricket on the Hearth" in Rochester, N. Y., where the outbreak of this pest was said to be the worst in the history of the city. Very abundant on August 18 in a cottage at Rockaway Beach, N. Y. Abundant in public dump and nearby houses in Springfield, Pa., on August 13 and 29. Very abundant in cellar of a house in Dayton, Ohio.

Oklahoma. R. G. Dahms (September 20): This cricket reported as abundant in homes and stores in many localities in southwestern Oklahoma.

EUROPEAN EARWIG (Forficula auricularia L.)

Massachusetts and New York. E. A. Back (September): On July 22 a correspondent at Pottersville, Mass., reported this insect present in houses. On August 28 at Swansea, Mass., a correspondent wrote of having first observed earwigs 2 years ago. Now they are abundant on clothing on the line and they "bite or sting when they get on you." On August 10 a specimen was received from Rochester, N. Y. (Det. by A. B. Gurney.)

Alabama. J. M. Robinson (August 31): European earwig reported on potato at Fort Wayne on August 24.

Idaho and Washington. B. J. Landis (September 20): More abundant than previously observed at Pullman, Walla Walla, and Ellensburg, Wash., and at Moscow, Idaho. Damage done in flower and vegetable gardens. Sweet corn showing considerable damage at Pullman and Moscow, and potatoes at Moscow.

Utah. G. F. Knowlton (September 14): Reported as infesting sweet corn ears in the infested part of Farmington.

AN EARWIG (Anisolabis maritima Bonelli)

Massachusetts. E. A. Back (September): Received on June 2 from Scituate with statement that an exceptionally high tide 1 day last August drove hundreds over the sea wall and onto our lawn and cement piazza. Also reported on August 15 infesting houses near Gloucester. (Det. by A. B. Gurney.)

AN EARWIG (Doru lineare Esch.)

Alabama. E. A. Back (September): Forwarded from Robertsdale on August 17, where they were excessively abundant and driving trade from tourist camp by entering cottages and their furnishings. (Det. by A. B. Gurney.)

BROWN-BANDED ROACH (Supella supellectilium Serv.)

Indiana and Missouri. J. J. Davis (September 27): During the last month or 6 weeks, reports and specimens have been received from pest control operators at Columbus, Ind., and Cape Girardeau, Mo.

A CRICKET (Nemobius fasciatus Deg.)

New York. E. A. Back (September): Reported on August 18 by Public Health Department, Fort Plain, as very abundant and annoying to householders, often eating silk fabrics. (Det. by A. B. Gurney.)

MOTHS (Ephestia spp.)

District of Columbia. E. A. Back (September): Larvae and adults of E. cautella Walk. found in numbers on August 17 feeding on broken cotton seeds; perfect seeds unaffected. (Det. by C. Heinrich.) On August 16 a heavy infestation of E. kuehniella Zell. present throughout an old mill in Rock Creek Park.

NORTHERN MOLE CRICKET (Gryllotalpa hexadactyla Perty)

Indiana. E. A. Back (September): Reported on August 19 as in cellar of house in South Bend. (Det. by A. B. Gurney.)

SOUTHERN MOLE CRICKET (Scapteriscus acletus R. & H.)

Florida. E. A. Back (September): Captured in June at Daytona Beach at lights of store windows to which they had flown. (Det. by A. B. Gurney.)

A CERAMBYCID (Stromatium fulvum Villers)

New Jersey. E. A. Back (September): On August 24 collected on furniture from which specimens were emerging about 1 year after construction. A European species, more or less cosmopolitan, it is not known to be established in the United States, according to W. S. Fisher. (Det. by W. S. Fisher.)

A FUNGUS BEETLE (Typhaea fumata L.)

Minnesota. A. G. Ruggles and C. E. Mickel (September 13): Reported attacking grain in extreme abundance in two areas in southern Minnesota.

AN AMBROSIA BEETLE (Pteroceyclon fasciatum Say)

Tennessee. G. M. Bentley (August 16): Reported as doing damage to mahogany wood at a large factory in Memphis. (Det. by M. W. Blackman.)

TREE LICE (Psocidae)

United States. E. A. Back (September): Psocids received from New York City on August 8, 9, 11, 13, 16, and 18, from apartment houses. Infestations general in most instances in recently completed and occupied buildings. Reports of abundance on August 18 in Brooklyn, N. Y., in new apartment house, just completed. On August 16 at Brooklyn abundant in an apartment built 1 year. On August 20 from Garrett Park, Md., specimens of Ectopsocus sp. received, of which A. B. Gurney, who made the determination, writes: "This is a species that we have received a number of times in quarantine from Mexico but further studies will be necessary to identify the species." Psocids on August 6 at Sophia, W. Va., very annoying in apartment house with walls of a vegetable insulation board. Reported on July 15 in a new upholstered sofa at Georgetown, S. C. On August 27 at Cleveland, Ohio, troublesome in house painted during July, after period of 15 years of neglect; no psocids observed before painting. Reported in August in Barrington, Ill., as abundant inside and outside of newly built house. Reported on August 11 as unusually abundant in a house at Boise, Idaho. On August 11 reported as exceedingly abundant in house recently completed but unoccupied for several months before the pests were observed.

